

TOSHIBA

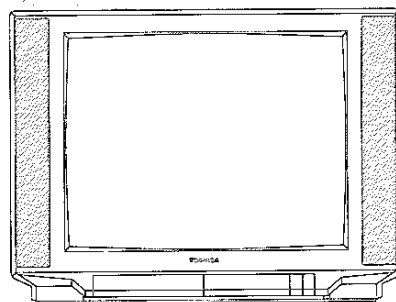
FILE NO. 030-9625

SERVICE MANUAL

COLOUR TELEVISION

C5SR Chassis

2860DF



PRINTED IN JAPAN, Oct., 1986 (S)

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

1. The E.H.T. must be checked every time the receiver is serviced to ensure that the C.R.T. does not emit X-ray radiation as result of excessive E.H.T. voltage. The nominal E.H.T. for this receiver is 26.5 kV at zero beam current (minimum brightness) operating at 220V a.c. The maximum E.H.T. voltage permissible in any operating circumstances must not exceed 29.0 kV. When checking the E.H.T., use the 'High Voltage Check' procedure in this manual using an accurate E.H.T. voltmeter.
2. The only source of X-RAY radiation in this receiver is the C.R.T. To prevent X-ray radiation, the replacement C.R.T. must be identical to the original fitted as specified in the Parts List.
3. Some components used in this receiver have safety related characteristics preventing the C.R.T. from emitting X-ray radiation. For continued safety, replacement component should only be made after referring the Product Safety Notice below.

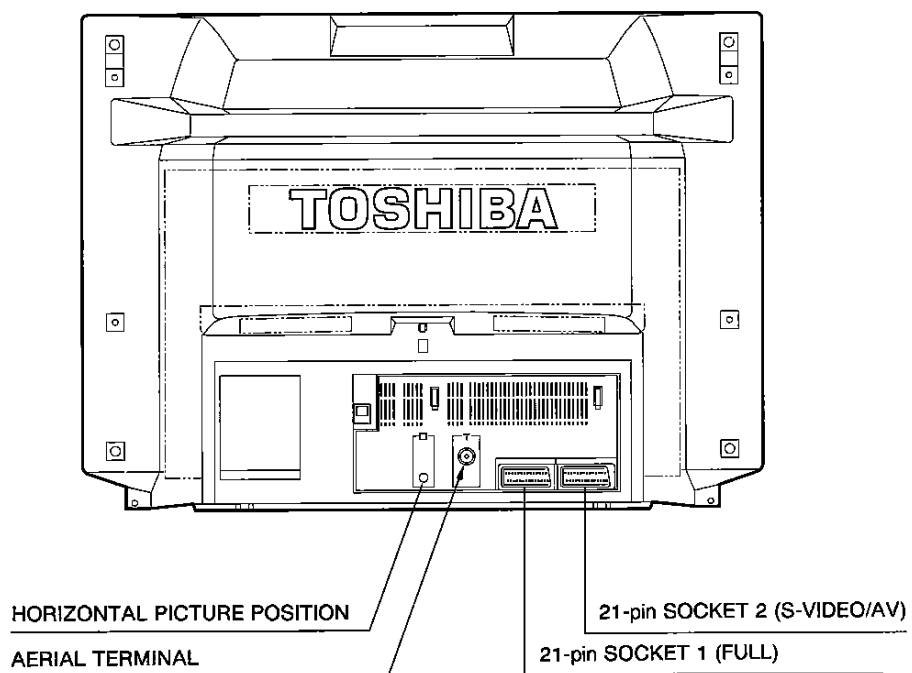
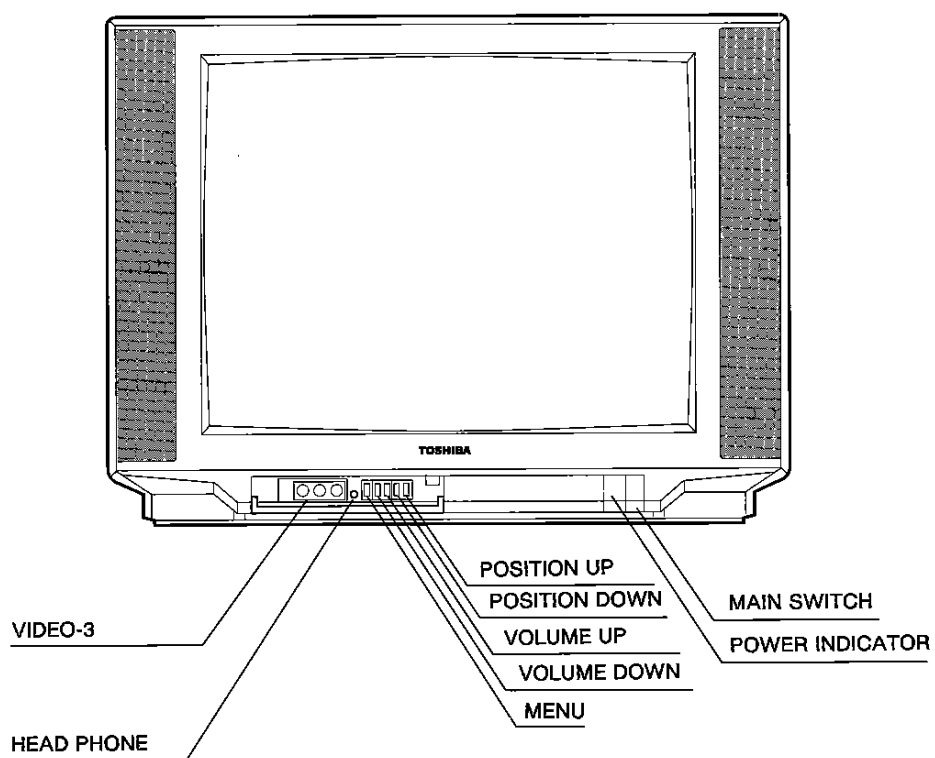
SAFETY PRECAUTION

1. This receiver has a nominal working E.H.T. voltage of 24.5 kV. Extreme caution should be exercised when working on the receiver with the back removed.
Do not attempt to service this receiver if you are not conversant with the precautions and procedures for working on high voltage equipment.
When handling or working on the C.R.T., always discharge the anode to the receiver chassis before removing the anode cap
The C.R.T., if broken, will violently expel glass fragments. Use shatter proof goggles and take extreme care while handling.
Do not hold the C.R.T. by the neck as this is a very dangerous practice.
2. It is essential that to maintain the safety of the customer all cable forms be replaced exactly as supplied from factory.
3. A small part of the chassis used in this receiver is, when operating, at approximately half mains potential at all times. It is therefore essential in the interest of safety that when serving or connecting any test equipment the receiver should be supplied via a suitable isolating transformer of adequate rating.
4. Replace blown fuses within the receiver with the fuse specified in the parts list.
5. When replacing wires or components to terminals or tags, wind the leads around the terminal before soldering. When replacing safety components identified by the international hazard symbols on the circuit diagram and parts list, it must be a Toshiba approved type and must be mounted as the original.
6. Keep wires away from high temperature components.

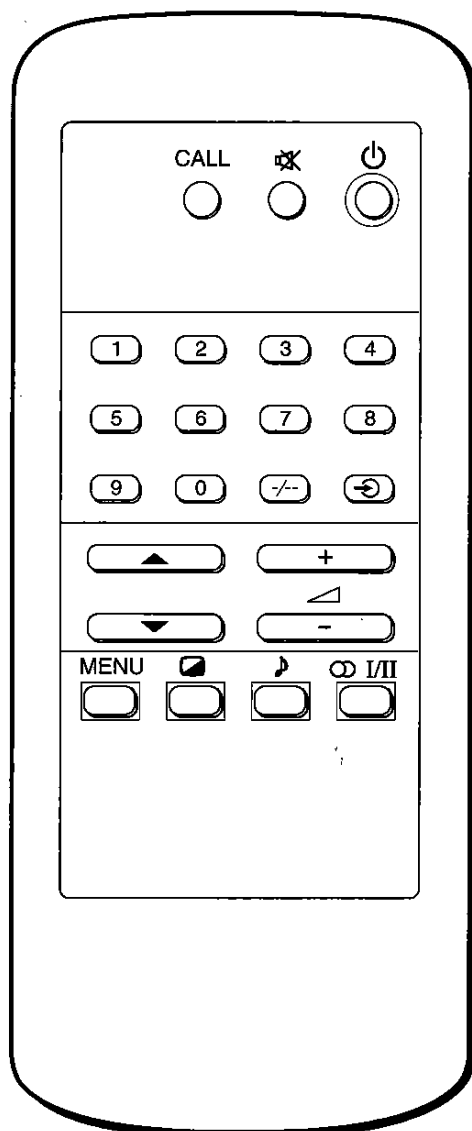
PRODUCT SAFETY NOTICE

Many electrical and mechanical components in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-ray radiation protection afforded by them cannot necessarily be obtained by using replacements rated at higher voltages or wattage, etc. Components which have these special safety characteristics in this manual and its supplements are identified by the international hazard symbols on the schematic diagram and parts list. Before replacing any of these components read the parts list in this manual carefully. Substitute replacement components which do not have the same safety characteristics as specified in the parts list may create X-ray radiation.

FRONT CONTROLS AND REAR VIEWS



REMOTE HAND HELD UNIT

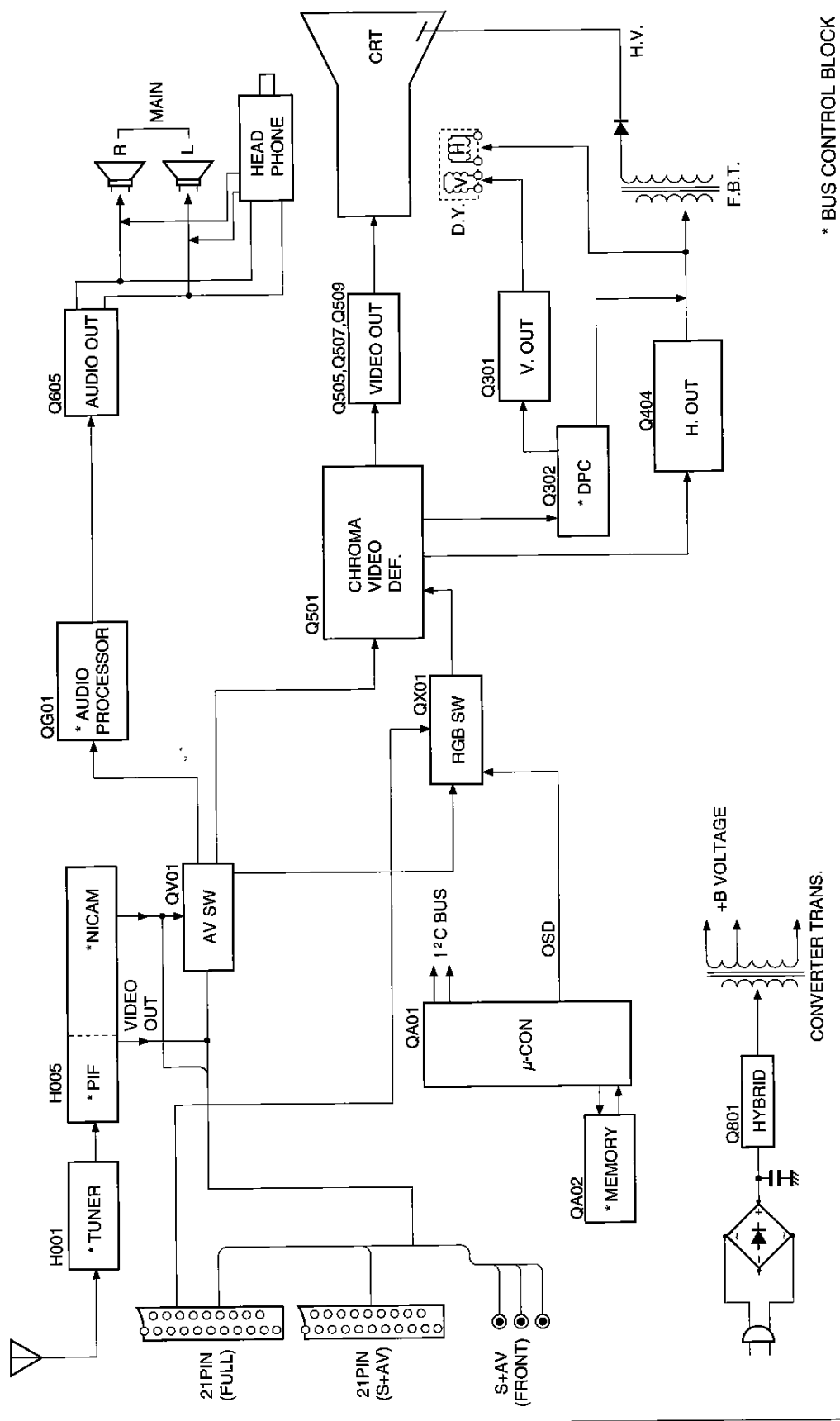


CT-9841

KEY ASSIGNMENT

- ⏻ ON/STAND-BY
- 🔇 MUTE
- CALL DISPLAY CALL
- MENU TUNING & OTHER MENU
- 🖼️ PICTURE MENU
- 🎵 SOUND MENU
- 📺 I/II <TV MODE> STEREO BILINGUAL
- 1~9, 0 ... TEN KEY
- / - - 1 or 2 place
- 📺 VIDEO INPUT (EXTERNAL INPUT SOURCE SW.)
- 🔊 VOLUME
- + ... LEVEL PLUS (VOLUME, MENU)
- LEVEL MINUS (VOLUME, MENU)
- ▲ UP (POS., CH., TEXT PAGE)
- ▼ DOWN (POS., CH., TEXT PAGE)

CIRCUIT BLOCK DIAGRAM



* BUS CONTROL BLOCK

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

INSTALLATION AND SERVICE ADJUSTMENTS

GENERAL INFORMATION

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.

This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials. Plug the power cord into a convenient 220volts 50 Hz AC two pin power outlet. Turn the receiver ON. Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the power to the receiver is switched ON. If the set is moved or faced in a different direction, the power switch must be switched off at least 30 minutes in order that the automatic degaussing circuit operates properly. Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the receiver and slowly withdraw the coil to a distance of about 2 m before disconnecting it from AC source. If colour shading still persists, perform the COLOUR PURITY ADJUSTMENT and CONVERGENCE ADJUSTMENTS procedures.

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. High voltage will be measured below 29.0 kV.

HORIZONTAL CENTRE ADJUSTMENT

1. Receive the UK PHILIPS pattern.
2. Set the contrast and colour to centre, and the brightness to centre.
3. Adjust H. CENTER USER Control (R452) so the pattern centre can be located at the screen centre.

FOCUS ADJUSTMENT

Adjust FOCUS Control on FLYBACK TRANS. (T461) for well defined scanning lines in the centre area on the screen.

PAL MATRIX ADJUSTMENT

1. Tune in the colour programme of the Philips pattern.
2. Set the COLOUR Control to obtain the proper colour.
3. If the PAL MATRIX adjustment is incorrect, the Venetian Blind would appear in the colour bars area. This case needs the adjustment.
4. At the first, adjust DL PHASE ADJ. Coil (L551) to minimize the Venetian Blind.
5. Next adjust 1H-DL ADJ. VR (R551) to minimize the Blind.
6. If the Venetian Blind still remains, adjust 1H-DL PHASE ADJ. Coil (L551) to minimize the Blind again.
7. Repeat the item 5 and 6 procedures, adjust the R551 and L551 until the Blind does not appear.

SET-UP ADJUSTMENT

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

Perform the adjustments in order as follows :

1. Color Purity
2. Convergence
3. White Balance

Note: The PURITY/CONVERGENCE MAGNET assembly and rubber wedges need mechanical positioning.

Refer to figure 2.

COLOR PURITY ADJUSTMENT

NOTE : Before attempting any purity adjustments, the receiver should be operated for at least fifteen minutes.

1. Demagnetize the picture tube and cabinet using a degaussing coil.
2. Set the brightness and contrast to maximum.
3. Use a green raster from among the built-in test signals.
4. Loosen the clamp screw holding the yoke and slide the yoke backward or forward to provide vertical green belt (zone) in the picture screen.

5. Remove the Rubber Wedges.

6. Rotate and spread the tabs of the purity magnet (See figure 3.) around the neck of the picture tube until the green belt is in the center of the screen. At the same time, enter the raster vertically.

7. Slowly move the yoke forward or backward until a uniform green screen is obtained. Tighten the clamp screw of the yoke temporarily.

8. Check the purity of the red and blue raster.

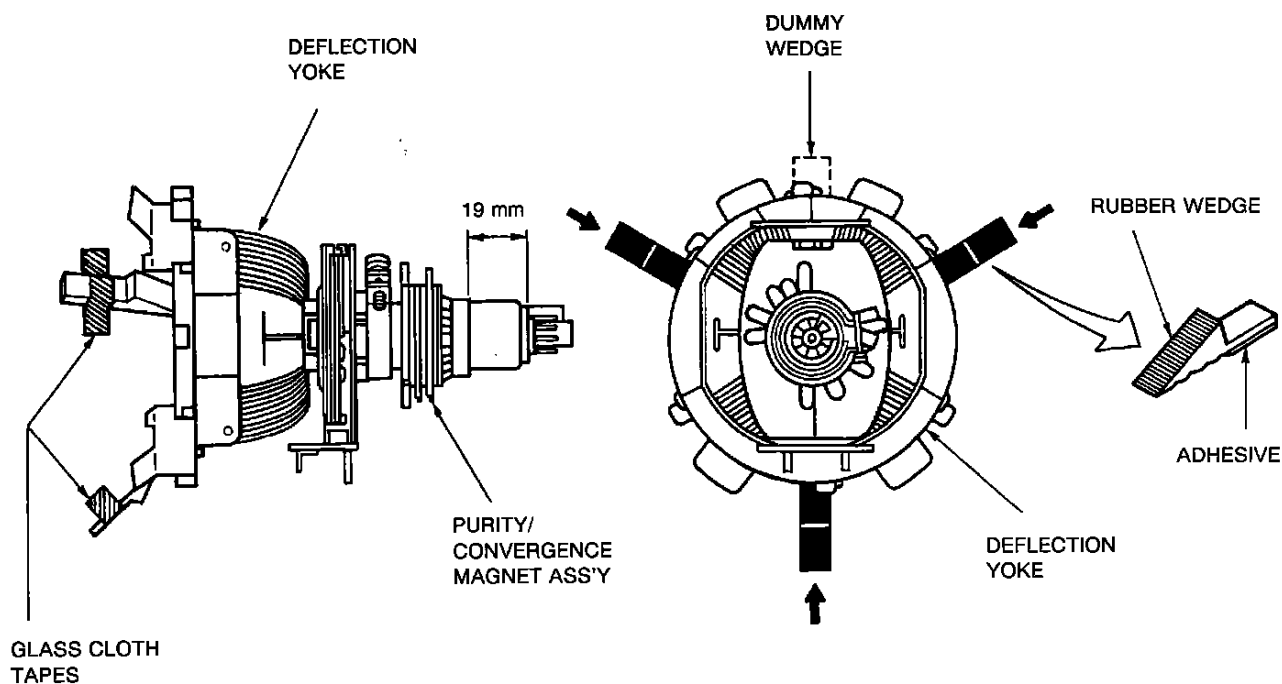


Figure 2.

CONVERGENCE ADJUSTMENTS

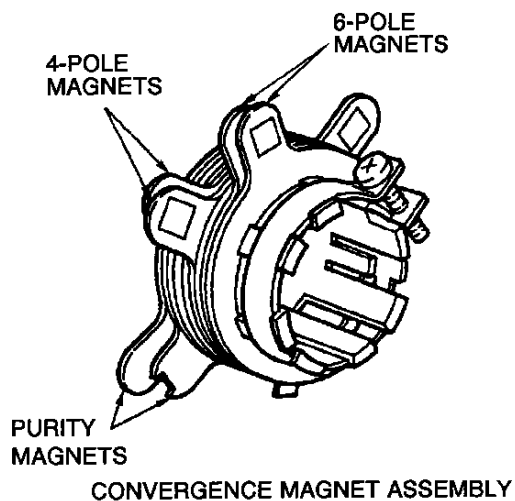
NOTE: Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

■ CENTER CONVERGENCE ADJUSTMENT

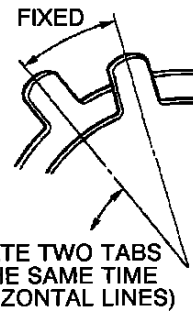
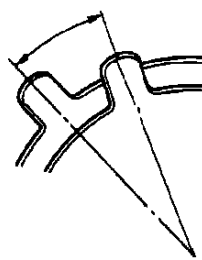
1. Use the cross-dot pattern from among the built-in test signals.
2. Set the brightness and contrast for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 3.) and superimpose red and blue vertical lines in the center area of the picture screen.
4. Turn the both tabs at the same time keeping the angle constant to superimpose red and blue horizontal lines at the center of the screen.
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line and green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3, 4, 5 keeping in mind red, green and blue movement, because 4-Pole Magnets and 6-Pole Magnets have mutual interaction and make dot movement complex.

■ CIRCUMFERENCE CONVERGENCE ADJUSTMENT

1. Loosen the clamping screw of deflection yoke slightly to allow the yoke to tilt.
2. Temporarily put a wedge as shown in figure 2. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See figure 4.) Push the mounted wedge into the space between picture tube and the yoke to fix the yoke temporarily.
4. Put other wedge into bottom space and remove the cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference. (See figure 4.)
6. Keep the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on picture tube to fix the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
8. After fixing three wedges, recheck overall convergence. Tighten the screw firmly to fix the yoke and check the yoke is firm.
9. Stick three adhesive tapes on wedges as shown in figure 2.

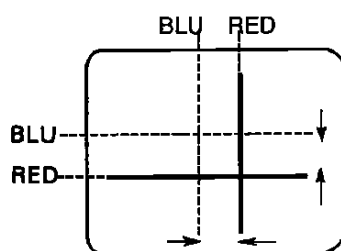


ADJUST THE ANGLE
(VERTICAL LINES)

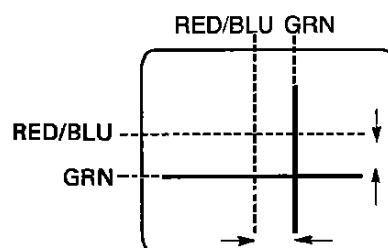


ADJUSTMENT OF MAGNETS

Figure 3.

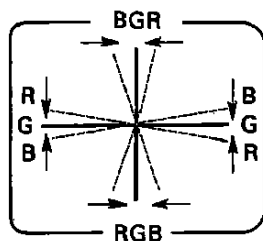


4-POLE MAGNETS MOVEMENT

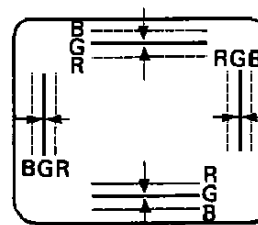


6-POLE MAGNETS MOVEMENT

Center Convergence by Convergence Magnets



INCLINE THE YOKE UP (OR DOWN)



INCLINE THE YOKE RIGHT (OR LEFT)

Circumference Convergence by DEF Yoke

Figure 4. Dot Movement Pattern

BELL COIL (LM01) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the synchroscope to the terminal Pin 2 of LM01.
3. Adjust LM01 for the flat level of amplitude in each colour bar waveform on the scope. (See figure 1.)

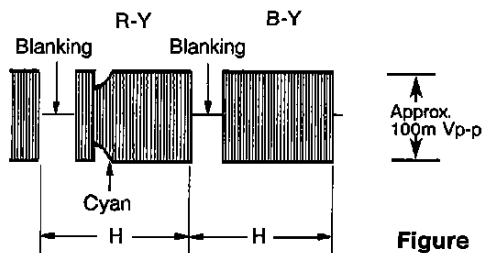


Figure 1.

IDENT COIL (LM04) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the DC voltmeter (Digital Voltmeter) to the pin 23 of IC501.
3. Adjust LM04 for the maximum indication (approx. DC10V) on the meter.

Note: When peak is observed twice, take higher peak to set. Lower peak is wrong to show abnormal color phase.

B-Y, R-Y DEMOD COIL (LM02, LM03) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Set the COLOUR, BRIGHTNESS and CONTRAST Controls free.
3. Connect the synchroscope to the pin 62 (TP-48B) of IC501.
4. Adjust LM02 so that the white level in picture part reaches to the vertical retrace line. (See figure 2.)
5. Then change the connection of synchroscope from the pin 62 to the pin 60 (TP-48R) of IC501.
6. Adjust LM03 so that the white level in picture part reaches to the vertical retrace line. (See figure 3.)

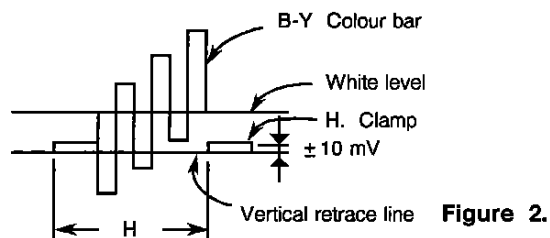


Figure 2.

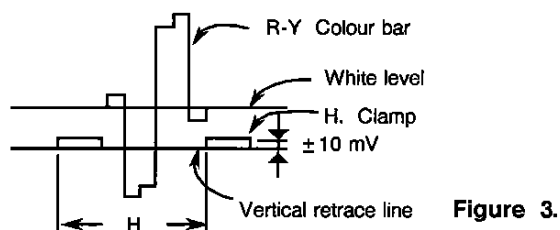


Figure 3.

CRT GREY SCALE ADJUSTMENT

1. Tune in an active channel.
2. Set the SERVICE SW. (S202) in the "H. LINE" position.
3. Turn the SCREEN Control (on T461) fully counter-clockwise.
4. By rotating the RED, GREEN and BLUE CUT OFF Controls (R557, R558, R559) to the mid position.
5. Set the GREEN and BLUE DRIVE Controls (R252, R253) to the center.
6. Rotate the SCREEN Control gradually clockwise until the first line appears slightly on the screen. Set the SCREEN Control to this position.
7. Adjust the CUT OFF Controls to obtain the slightly lighted horizontal lines in the same levels of three colours (RED, GREEN and BLUE). The lines may look like white if the CUT OFF Controls are adjusted properly.
8. Set the SERVICE SW. (S202) in the "RECEIVE" position.
9. Set the CONTRAST and COLOUR Controls to minimum, and BRIGHTNESS Control to the maximum.
10. Adjust the BLUE and GREEN DRIVE Controls (R252/R253) to obtain proper white-balanced picture in high light areas.
11. Set the BRIGHTNESS and CONTRAST Controls to obtain dark grey raster. Then check the white balance in low brightness. If the white balance is not proper, retouch the CUT OFF Controls and DRIVE Controls to obtain a good white balance in both low and high light areas.

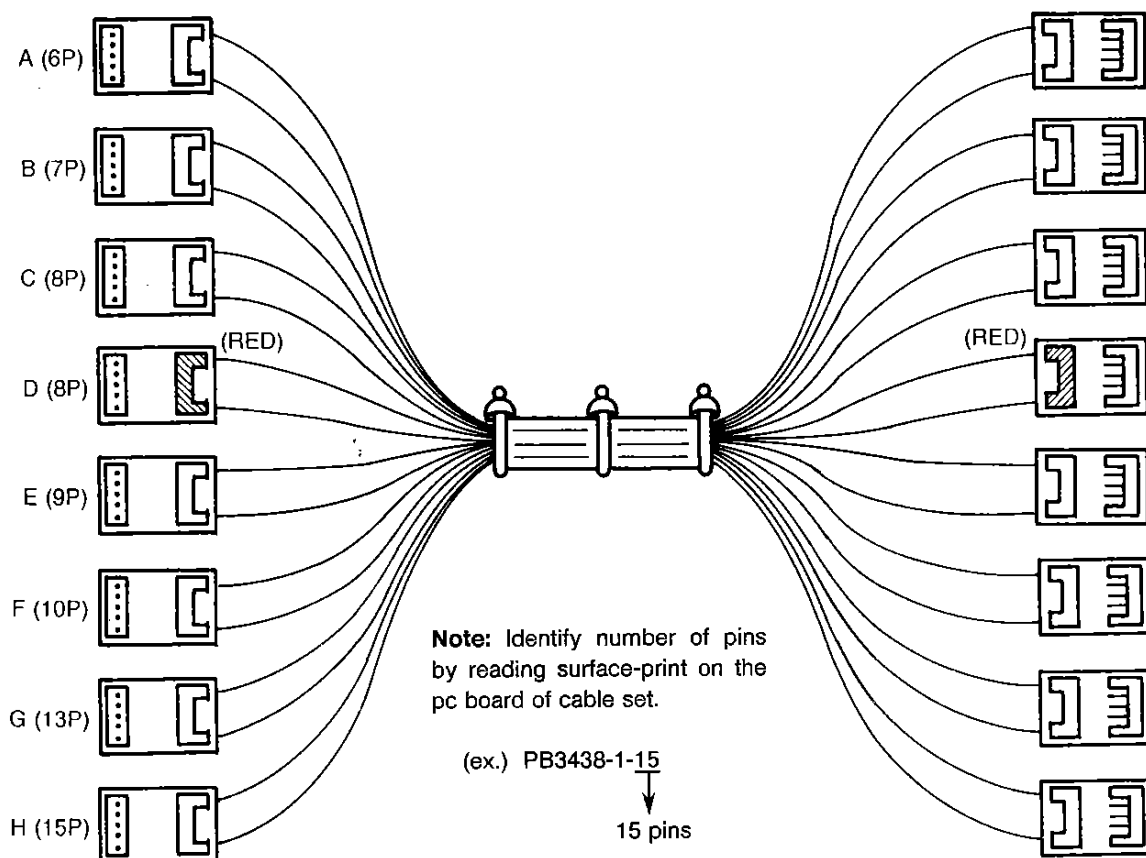
SUB-BRIGHTNESS ADJUSTMENT

1. Tune in a colour programme.
2. Set the CONTRAST Control to the minimum and the BRIGHTNESS Control to the centre.
3. Set the COLOUR Control to the centre.
4. Set the SUB-BRIGHT. Control (R255) to the centre and leave the receiver for five minutes in this state.
5. Watching the picture well, adjust the SUB-BRIGHT. Control in the position where the picture does not show evidence of blooming in high bright area and not appear too dark in low bright portion.
6. Check the proper picture variation by rotating the CONTRAST and BRIGHTNESS Controls to both extremes.
7. If the picture does not appear dark with the CONTRAST and BRIGHTNESS Controls turned to the minimum, or not appear bright with the controls turned to the maximum, adjust the SUB-BRIGHT. Control again for the acceptable picture.

EXTENSION CABLE SET

1. Extension Cable Set is available for servicing modules of C2DB chassis.
For C5SR chassis, however, this cable is used for CHROMA Board.
2. Identify number of pins by reading surface-print on the pc board of cable set.

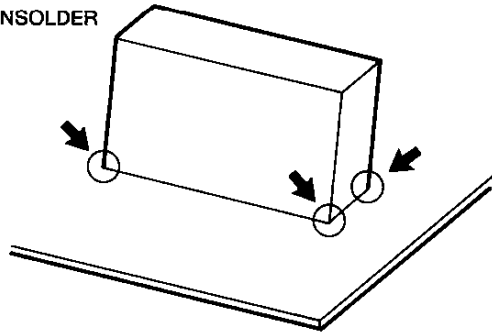
Part No.	Description
23305270	Extension Cable Set



TO USE THE CABLE SET

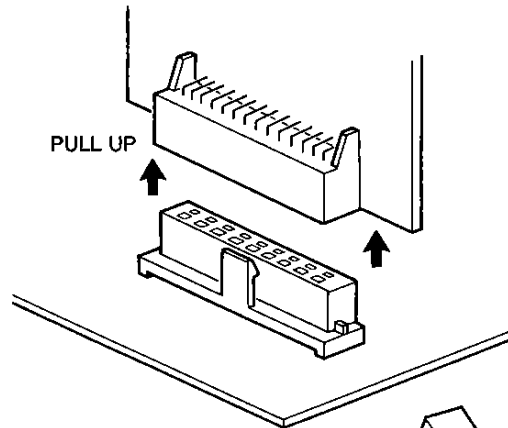
1. Unsolder corners on shielding case of module, which are marked with arrow in the figure.

UNSOLDER

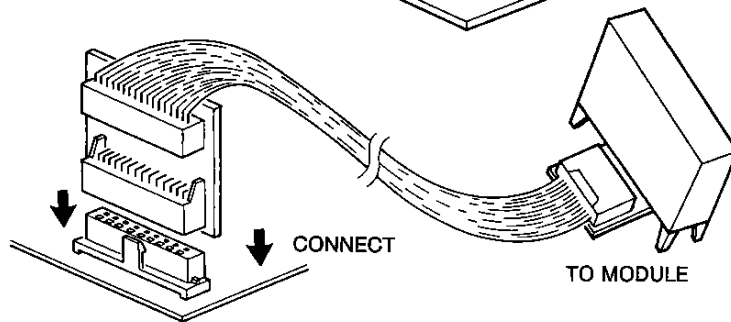


2. Remove shielding case, and pull up module to disconnect.

PULL UP

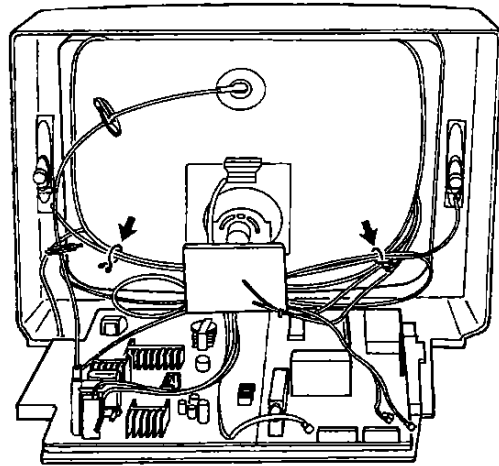


3. Connect Extension Cable Set to module and Main board.

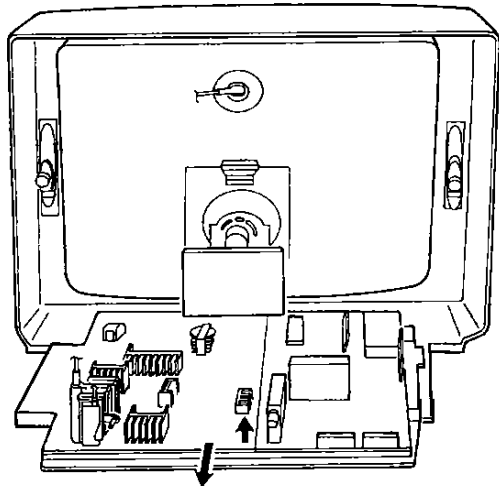


HOW TO MAKE THE CHASSIS STAND FOR REPAIR

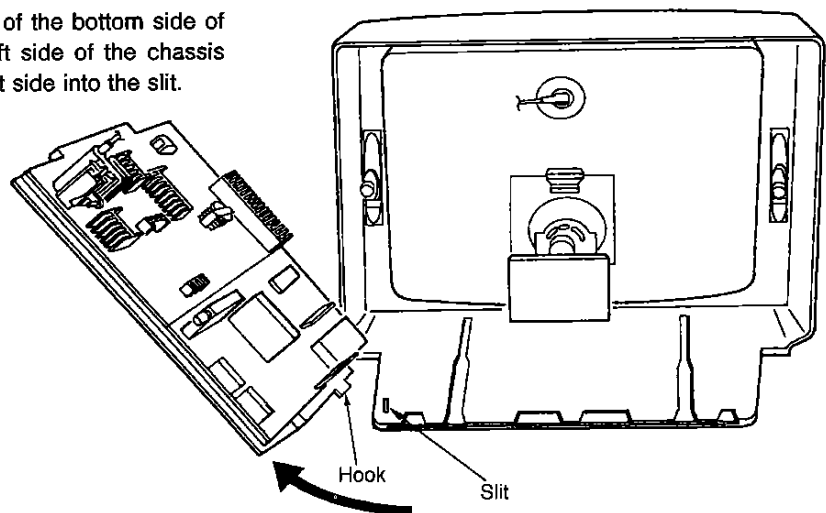
1. Disconnect the lead wires for the speaker fixed to the degausser coil with three omega clips.



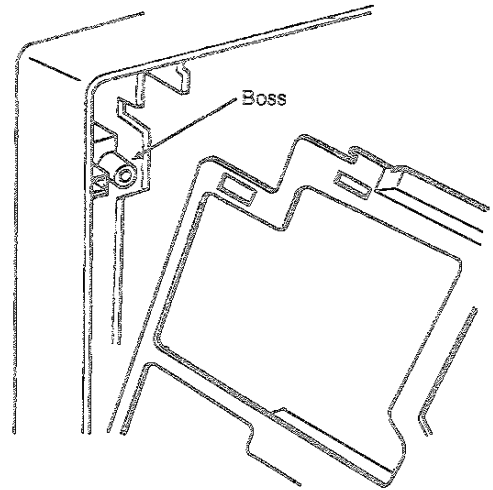
2. Lifting up slightly, pull out the chassis from the front mask.



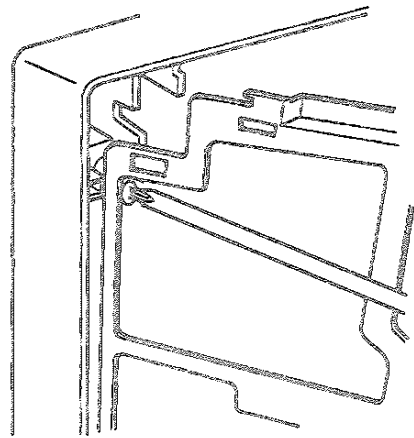
3. There is a slit at the left front of the bottom side of the front mask. Lift up the left side of the chassis and insert the hook at the right side into the slit.



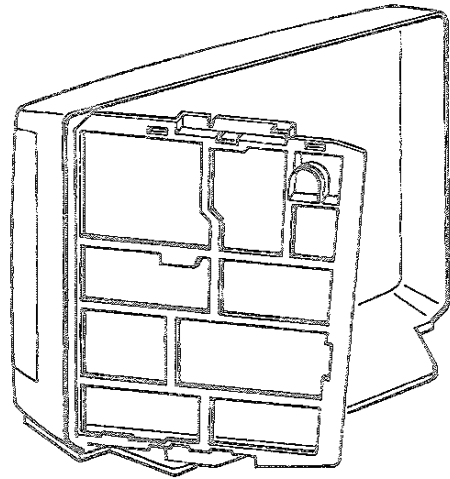
4. To retain the chassis, use the screw hole (boss) at the upper left for back cover positioning.
To retain the chassis, use the upper left boss (highest boss).



5. Fix it with screws for back cover fixing.
Upper hole of the chassis frame for 2860.



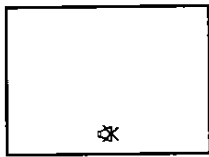
6. After repair works, restore the unit by reversing the above steps.



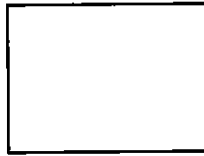
SERVICE MODE

1. ENTERING TO SERVICE MODE

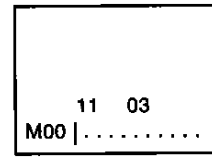
1) Press  button once on Remote Control.



2) Press  button again to keep pressing.



3) Keep pressing the  button, press MENU button on TV set.



(Service mode display)

2. SELECTING THE ADJUSTING ITEMS

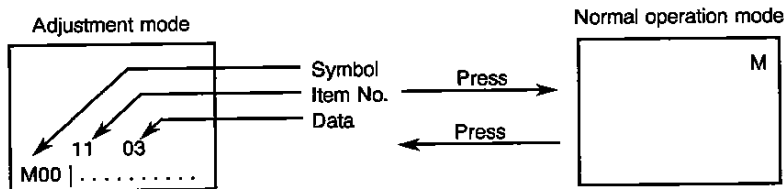
Every pressing of CHANNEL  button changes the adjustment items in the following order. ( button for reverse order.)

3. ADJUSTING THE DATA

Pressing of VOLUME  or  button will change the value of data in the range from 00 to FF. The variable range depends on the adjusting item.

4. NORMAL OPERATION ON THE SERVICE MODE

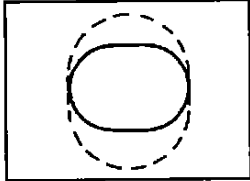
Press MENU button on TV.

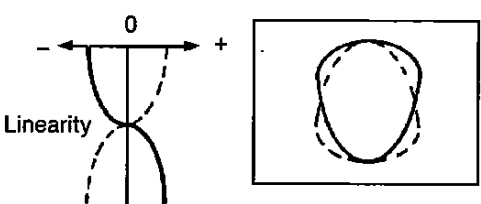
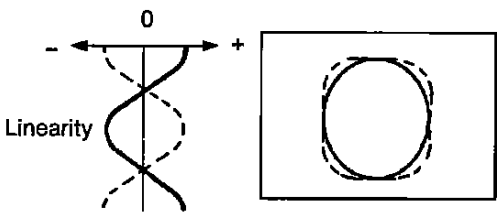
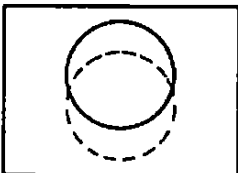
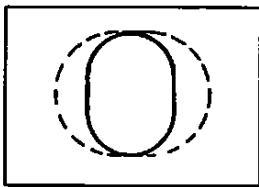


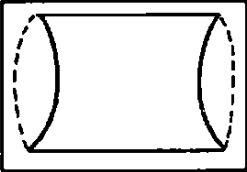
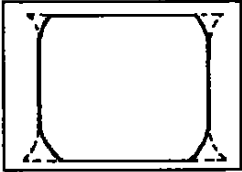
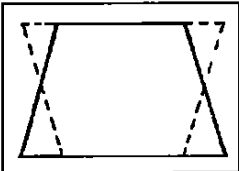
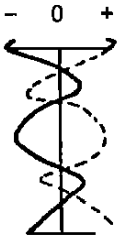
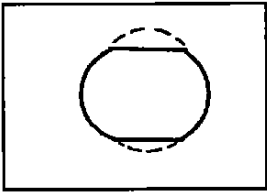
5. EXIT FROM SERVICE MODE

Press POWER button on the remote control to turn off the TV once.

SUB DATA ADDITIONAL DESCRIPTION

Symbol	Description
HIT	V amplitude adjustment. 

Symbol	Description
LIN	V linearity correction 1.  Linearity balance between top and bottom screen.
VSC	V linearity correction 2.  Linearity balance between top/bottom and center.
VPS	V picture position adjustment. 
VCP	Setting of amount of V amplitude correction against variation of screen brightness.
WID	H amplitude adjustment. 

Symbol	Description
DPC	H pin-cushion distortion correction. 
CNR	H pin-cushion distortion correction at four corners. 
KEY	Pedestal distortion correction. 
HCP	Setting of amount of H amplitude correction against variation of screen brightness.
VMC	V linearity correction. Linearity balance at 1/4, 3/4 areas from top. Linearity  

ADJUSTMENT PROCEDURE

Adjustment parts or Bus control item	Input point/ Output point	Adjustment signal	Adjustment conditions and procedures
: Horizontal amplitude adjustment (WID) : Pin distortion compensation amount adjustment (DPC) : Keystone distortion compensation amount adjustment (KEY)	Visual check of picture (Bus control)	WG Philips pattern Do not use the Philips pattern of FRANCESECAM.	1. Conditions: After V. HEIGHT, VERT POSITION and H. CENT have been adjusted, set the controllers as follows: Contrast: Max Brightness: Center Color: Center 2. Adjustment procedure a. Adjust the horizontal amplitude by the sub address WID. Adjust so that the left and right white flags of Philips pattern disappear at the very limits. b. Make the left and right vertical bars straight by the sub address DPC. c. Compensate the key distortion by the sub address KEY. d. Again, adjust the sub address WID.
: HEIGHT (HIT) : VERT. POSITION (VPS)	Visual check of picture (Bus control)	WG Philips pattern Do not use the Philips pattern of FRANCESECAM.	1. Conditions: Contrast: Max Brightness: Center Color: Center 2. Adjustment procedure a. By the bus address VPS, adjust V. position so that the circle of Philips pattern comes to the vertical center. b. Adjust HIT so that the upper and lower flags of Philips pattern disappear at the very limits.

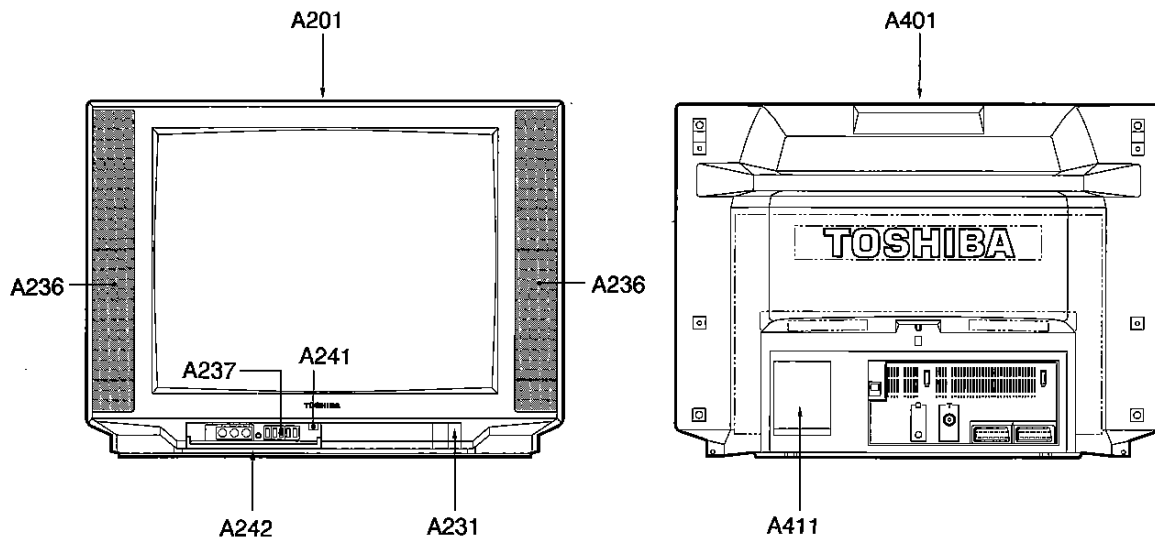
ROM DATA LIST FOR IIC BUS CONTROL

(Reference Value)

Symbol	Comment	Data
M00	MODE 0	00
M01	MODE 1	50
M01	MODE 1 USE ALPS TUNER	18
M02	MODE 2	03
M03	MODE 3	51
HIT	HEIGHT	* 30
LIN	V. LINEARITY	32
VSC	V. S-CORRECTION	32
VPS	V. POSITION	* 07
VCP	V. COMPENSATION	30
WID	H. WIDTH	* 26
DPC	DPC	* 24
CNR	DPC CORNER (Philips TUBE/video color TUBE)	32
KEY	KEystone	* 09
HCP	H. COMPENSATION	10
VMC	V. M-CORRECTION	41
SHI	16:9 SUB HEIGHT	00
SLI	16:9 SUB V. LINEARITY	32
SVS	16:9 SUB V, S-CORRECTION	17
SDP	16:9 SUB DPC (Philips TUBE/video color TUBE)	17
SCN	16:9 SUB CORNER	30
WCT	WOOFER FC SET	12
BAC	BASS CENTER	39
TRC	TREBLE CENTER	48
BAX	BASS MAX	79
WON	BAZOOKA AUTO	01
WOF	BAZOOKA OFF	19
BAE	BASS UP	02
TRE	TREBLE UP	08
VOE	VOL UP	00
WFL	WOOFER LEVEL	100
EMX	NICAM OFF LEVEL (PHIL)	252
EMN	NICAM ON LEVEL (PHIL)	100
FMA	FM INPUT ATT (PHIL)	00
STS	STEREO SEPARATION	00

* Mark items should be adjusted.

CABINET REPLACEMENT PARTS LIST



Location No.	Part No.	Description
A201	23510055	Front Cover
A231	23444832	Button, Power
A236	23519359	Speaker Grille
A237	23443961	Button, Control
A241	70368125	Push Catch for Door
A242	23426615	Door
△A401	23426393	Back Cover
A411	23560220	Label, Model No.

CHASSIS REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

NOTICE:

- The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.
- The PC board assembly with * mark is no longer available after the end of the production.

ABBREVIATIONS:

Capacitors.....	CD : Ceramic Disk	PF : Plastic Film	EL : Electrolytic
Resistors.....	CF : Carbon Film	CC : Carbon Composition	MF : Metal Film
	OMF : Oxide Metal Film	VR : Variable Resistor	FR : Fusible Resistor

(All CD and PF capacitors are $\pm 5\%$, 50V and all resistors, $\pm 5\%$, 1/6W unless otherwise noted.)

Location No.	Part No.	Description	Location No.	Part No.	Description
CAPACITORS			C317	24617926	EL, 220 μ F, $\pm 20\%$, 16V
C100	24794221	EL, 220 μ F, $\pm 20\%$, 16V	C318	24668221	EL, 220 μ F, $\pm 20\%$, 35V
C101	24794221	EL, 220 μ F, $\pm 20\%$, 16V	C319	24212102	CD, 1000pF, $\pm 10\%$
C182	24232103	CD, 0.01 μ F, +80%, -20%	C321	24591183	PF, 0.018 μ F
C183	24797479	EL, 4.7 μ F, $\pm 20\%$, 50V	C322	24617912	EL, 2.2 μ F, $\pm 10\%$, 50V
C185	24232103	CD, 0.01 μ F, +80%, -20%	C323	24590683	PF, 0.068 μ F
C188	24797100	EL, 10 μ F, $\pm 20\%$, 50V	C324	24538224	PF, 0.22 μ F
C189	24232103	CD, 0.01 μ F, +80%, -20%	C325	24232103	CD, 0.01 μ F, +80%, -20%
C190	24232103	CD, 0.01 μ F, +80%, -20%	C326	24538474	PF, 0.47 μ F
C193	24797100	EL, 10 μ F, $\pm 20\%$, 50V	C341	24794101	EL, 100 μ F, $\pm 20\%$, 16V
C194	24797229	EL, 2.2 μ F, $\pm 20\%$, 50V	C378	24590104	PF, 0.1 μ F
C202	24795101	EL, 100 μ F, $\pm 20\%$, 25V	C379	24232103	CD, 0.01 μ F, +80%, -20%
C203	24232103	CD, 0.01 μ F, +80%, -20%	C380	24212102	CD, 1000pF, $\pm 10\%$
C204	24797220	EL, 22 μ F, $\pm 20\%$, 50V	C401	24617920	EL, 120 μ F, $\pm 20\%$, 25V
C205	24797478	EL, 0.47 μ F, $\pm 20\%$, 50V	C402	24353241	CD, 240pF
C206	24232103	CD, 0.01 μ F, +80%, -20%	C403	24797339	EL, 3.3 μ F, $\pm 20\%$, 50V
C207	24794100	EL, 10 μ F, $\pm 20\%$, 16V	C405	24590183	PF, 0.018 μ F
C208	24436220	CD, 22pF	C406	24590183	PF, 0.018 μ F
C209	24232103	CD, 0.01 μ F, +80%, -20%	C407	24590273	PF, 0.027 μ F
C210	24797100	EL, 10 μ F, $\pm 20\%$, 50V	C408	24794221	EL, 220 μ F, $\pm 20\%$, 16V
C211	24232103	CD, 0.01 μ F, +80%, -20%	C409	24232103	CD, 0.01 μ F, +80%, -20%
C212	24232103	CD, 0.01 μ F, +80%, -20%	C410	24082261	PF, 5600pF, 100V
C213	24232103	CD, 0.01 μ F, +80%, -20%	C411	24435330	CD, 33pF, 500V
C214	24436220	CD, 22pF	C412	24590182	PF, 1800pF
C216	24436680	CD, 68pF	C413	24214391	CD, 390pF, $\pm 10\%$, 500V
C240	24538474	PF, 0.47 μ F	C414	24212471	CD, 470pF, $\pm 10\%$
C301	24085944	EL, 2.2 μ F, $\pm 20\%$, 50V, Non-Polar	C416	24709100	EL, 10 μ F, $\pm 20\%$, 200V
C302	24212152	CD, 1500pF, $\pm 10\%$	C417	24214821	CD, 820pF, $\pm 10\%$, 500V
C303	24214221	CD, 220pF, $\pm 10\%$, 500V	C421	24082673	PF, 0.47 μ F, 250V
C304	24590102	PF, 1000pF	C422	24829473	PF, 0.047 μ F, 400V
C305	24617912	EL, 2.2 μ F, $\pm 10\%$, 50V	C423	24082673	PF, 0.47 μ F, 250V
C306	24073059	EL, 3300 μ F, $\pm 20\%$, 25V	C430	24538474	PF, 0.47 μ F
C307	24232103	CD, 0.01 μ F, +80%, -20%	C440	24082482	PF, 7000pF, $\pm 3\%$, 1500V
C308	24693473	PF, 0.047 μ F, 100V	C441	24214221	CD, 220pF, $\pm 10\%$, 500V
C310	24765102	EL, 1000 μ F, $\pm 20\%$, 35V	C443	24214221	CD, 220pF, $\pm 10\%$, 500V
C311	24214151	CD, 150pF, $\pm 10\%$, 500V	C444	24082517	PF, 5100pF, $\pm 3\%$, 1800V
C313	24082057	PF, 0.22 μ F, 100V	C445	24095903	PF, 0.056 μ F, $\pm 10\%$, 250V
C314	24591563	PF, 0.056 μ F	C446	24095887	PF, 0.01 μ F, $\pm 3\%$, 630V
C315	24590104	PF, 0.1 μ F	C447	24700479	EL, 4.7 μ F, $\pm 20\%$, 250V
C316	24538474	PF, 0.47 μ F	C448	24640962	EL, 33 μ F, $\pm 20\%$, 200V
			C449	24667102	EL, 1000 μ F, $\pm 20\%$, 25V

Location No.	Part No.	Description
C450	24794471	EL, 470 μ F, $\pm$ 20%, 16V
C463	24212222	CD, 2200pF, $\pm$ 10%
C464	24082712	PF, 1.5 μ F, 250V
C466	24082669	PF, 0.33 μ F, 250V
C470	24794220	EL, 22 μ F, $\pm$ 20%, 16V
C471	24538474	PF, 0.47 μ F
C473	24538474	PF, 0.47 μ F
C501	24794331	EL, 330 μ F, $\pm$ 20%, 16V
C502	24474181	CD, 180pF, $\pm$ 10%
C503	24436181	CD, 180pF
C504	24353150	CD, 15pF
C505	24590273	PF, 0.027 μ F
C507	24590103	PF, 0.01 μ F
C508	24085944	EL, 2.2 μ F, $\pm$ 20%, 50V, Non-Polar
C509	24353330	CD, 33pF
C510	24232103	CD, 0.01 μ F, +80%, -20%
C511	24232103	CD, 0.01 μ F, +80%, -20%
C512	24353220	CD, 22pF
C513	24232103	CD, 0.01 μ F, +80%, -20%
C515	24797220	EL, 22 μ F, $\pm$ 20%, 50V
C516	24590104	PF, 0.1 μ F
C517	24590104	PF, 0.1 μ F
C518	24232103	CD, 0.01 μ F, +80%, -20%
C520	24797478	EL, 0.47 μ F, $\pm$ 20%, 50V
C521	24206478	EL, 0.47 μ F, 50V
C522	24206478	EL, 0.47 μ F, 50V
C523	24206478	EL, 0.47 μ F, 50V
C524	24797100	EL, 10 μ F, $\pm$ 20%, 50V
C525	24436820	CD, 82pF
C526	24436820	CD, 82pF
C527	24436820	CD, 82pF
C529	24353330	CD, 33pF
C531	24436561	CD, 560pF
C532	24436561	CD, 560pF
C533	24436681	CD, 680pF
C534	24794471	EL, 470 μ F, $\pm$ 20%, 16V
C536	24797479	EL, 4.7 μ F, $\pm$ 20%, 50V
C626	24797470	EL, 47 μ F, $\pm$ 20%, 50V
C633	24538124	PF, 0.12 μ F
C634	24538124	PF, 0.12 μ F
C636	24797229	EL, 2.2 μ F, $\pm$ 20%, 50V
C637	24667470	EL, 47 μ F, $\pm$ 20%, 25V
C638	24667470	EL, 47 μ F, $\pm$ 20%, 25V
C639	24796101	EL, 100 μ F, $\pm$ 20%, 35V
C641	24795470	EL, 47 μ F, $\pm$ 20%, 25V
C642	24797229	EL, 2.2 μ F, $\pm$ 20%, 50V
C643	24797479	EL, 4.7 μ F, $\pm$ 20%, 50V
C644	24667102	EL, 1000 μ F, $\pm$ 20%, 25V
C646	24667102	EL, 1000 μ F, $\pm$ 20%, 25V
C660	24797478	EL, 0.47 μ F, $\pm$ 20%, 50V
C674	24590102	PF, 1000pF
C677	24590102	PF, 1000pF
C684	24232103	CD, 0.01 μ F, +80%, -20%
C685	24232103	CD, 0.01 μ F, +80%, -20%
C699	24232103	CD, 0.01 μ F, +80%, -20%
△C801	24082318	PF, 0.1 μ F, $\pm$ 20%, AC250V
△C802	24094656	CD, 2200pF, $\pm$ 20%, AC400V
△C803	24094656	CD, 2200pF, $\pm$ 20%, AC400V
△C804	24082318	PF, 0.1 μ F, $\pm$ 20%, AC250V
△C807	24092281	CD, 4700pF, $\pm$ 20%, AC250V
△C808	24092281	CD, 4700pF, $\pm$ 20%, AC250V
C809	24086037	EL, 270 μ F, $\pm$ 20%, 400V
C810	24667331	EL, 330 μ F, $\pm$ 20%, 25V

Location No.	Part No.	Description
C811	24214471	CD, 470pF, $\pm$ 10%, 500V
C812	24676220	EL, 22 μ F, $\pm$ 20%, 100V
C813	24590222	PF, 2200pF
C814	24214471	CD, 470pF, $\pm$ 10%, 500V
C815	24095931	PF, 2200pF, 1250V
C816	24795470	EL, 47 μ F, $\pm$ 20%, 25V
C817	24092341	CD, 470pF, $\pm$ 10%, 2kV
C818	24214471	CD, 470pF, $\pm$ 10%, 500V
C819	24797470	EL, 47 μ F, $\pm$ 20%, 50V
C820	24794470	EL, 47 μ F, $\pm$ 20%, 16V
C827	24794102	EL, 1000 μ F, $\pm$ 20%, 16V
C828	24212101	CD, 100pF, $\pm$ 10%
C829	24796222	EL, 2200 μ F, $\pm$ 20%, 35V
C830	24092337	CD, 220pF, $\pm$ 10%, 2kV
C831	24086953	EL, 220 μ F, $\pm$ 20%, 160V
C833	24797100	EL, 10 μ F, $\pm$ 20%, 50V
C835	24797479	EL, 4.7 μ F, $\pm$ 20%, 50V
C836	24797100	EL, 10 μ F, $\pm$ 20%, 50V
C837	24797100	EL, 10 μ F, $\pm$ 20%, 50V
C840	24214471	CD, 470pF, $\pm$ 10%, 500V
C846	24590104	PF, 0.1 μ F
C849	24214471	CD, 470pF, $\pm$ 10%, 500V
C892	24794470	EL, 47 μ F, $\pm$ 20%, 16V
C901	24700100	EL, 10 μ F, $\pm$ 20%, 250V
C902	24095931	PF, 2200pF, 1250V
CA01	24474101	CD, 100pF, $\pm$ 10%
CA02	24474101	CD, 100pF, $\pm$ 10%
CA03	24474101	CD, 100pF, $\pm$ 10%
CA10	24212102	CD, 1000pF, $\pm$ 10%
CA11	24212102	CD, 1000pF, $\pm$ 10%
CA12	24794471	EL, 470 μ F, $\pm$ 20%, 16V
CA13	24794100	EL, 10 μ F, $\pm$ 20%, 16V
CA15	24590104	PF, 0.1 μ F
CA16	24797100	EL, 10 μ F, $\pm$ 20%, 50V
CA21	24232103	CD, 0.01 μ F, +80%, -20%
CA22	24797010	EL, 1 μ F, $\pm$ 20%, 50V
CA29	24232103	CD, 0.01 μ F, +80%, -20%
CA31	24473300	CD, 30pF
CA32	24473300	CD, 30pF
CA33	24212102	CD, 1000pF, $\pm$ 10%
CA90	24538474	PF, 0.47 μ F
CA91	24212102	CD, 1000pF, $\pm$ 10%
CA92	24590104	PF, 0.1 μ F
CB01	24474101	CD, 100pF, $\pm$ 10%
CB01	24794470	EL, 47 μ F, $\pm$ 20%, 16V
CB09	24794330	EL, 33 μ F, $\pm$ 20%, 16V
CB10	24797010	EL, 1 μ F, $\pm$ 20%, 50V
CB11	24436181	CD, 180pF
CB12	24212561	CD, 560pF, $\pm$ 10%
CB13	24212472	CD, 4700pF, $\pm$ 10%
CD01	24796220	EL, 22 μ F, $\pm$ 20%, 35V
CD11	24676339	EL, 3.3 μ F, $\pm$ 20%, 100V
CG04	24206010	EL, 1 μ F, 50V
CG05	24203220	EL, 22 μ F, $\pm$ 20%, 16V
CG07	24206010	EL, 1 μ F, 50V
CG08	24206010	EL, 1 μ F, 50V
CG09	24206010	EL, 1 μ F, 50V
CG10	24212102	CD, 1000pF, $\pm$ 10%
CG12	24590273	PF, 0.027 μ F
CG13	24232103	CD, 0.01 μ F, +80%, -20%
CG14	24203101	EL, 100 μ F, $\pm$ 20%, 16V
CG15	24590822	PF, 8200pF
CG16	24206010	EL, 1 μ F, 50V
CG17	24590273	PF, 0.027 μ F

Location No.	Part No.	Description
CG18	24590822	PF, 8200pF
CG19	24203100	EL, 10 μ F, $\pm$ 20%, 16V
CG20	24203100	EL, 10 μ F, $\pm$ 20%, 16V
CG21	24203100	EL, 10 μ F, $\pm$ 20%, 16V
CG22	24591224	PF, 0.22 μ F
CG23	24590104	PF, 0.1 μ F
CG24	24590104	PF, 0.1 μ F
CG25	24203100	EL, 10 μ F, $\pm$ 20%, 16V
CG26	24203100	EL, 10 μ F, $\pm$ 20%, 16V
CG27	24797478	EL, 0.47 μ F, $\pm$ 20%, 50V
CG28	24797478	EL, 0.47 μ F, $\pm$ 20%, 50V
CG29	24232103	CD, 0.01 μ F, +80%, -20%
CG30	24232103	CD, 0.01 μ F, +80%, -20%
CG31	24232103	CD, 0.01 μ F, +80%, -20%
CM01	24436221	CD, 220pF
CM02	24436221	CD, 220pF
CM03	24340180	CD, 18pF
CM04	24340180	CD, 18pF
CM05	24232103	CD, 0.01 μ F, +80%, -20%
CM06	24357270	CD, 27pF
CM07	24590563	PF, 0.056 μ F
CM08	24232103	CD, 0.01 μ F, +80%, -20%
CM09	24232103	CD, 0.01 μ F, +80%, -20%
CM10	24473270	CD, 27pF
CM12	24590104	PF, 0.1 μ F
CN01	24473270	CD, 27pF
CN02	24436270	CD, 27pF
CN03	24474101	CD, 100pF, $\pm$ 10%
CN04	24436101	CD, 100pF
CN06	24232103	CD, 0.01 μ F, +80%, -20%
CN11	24232103	CD, 0.01 μ F, +80%, -20%
CN12	24474331	CD, 330pF, $\pm$ 10%
CN13	24474121	CD, 120pF, $\pm$ 10%
CN14	24474102	CD, 1000pF, $\pm$ 10%
CN16	24590273	PF, 0.027 μ F
CN17	24232103	CD, 0.01 μ F, +80%, -20%
CV01	24797100	EL, 10 μ F, $\pm$ 20%, 50V
CV02	24206010	EL, 1 μ F, 50V
CV03	24797100	EL, 10 μ F, $\pm$ 20%, 50V
CV04	24206010	EL, 1 μ F, 50V
CV05	24232103	CD, 0.01 μ F, +80%, -20%
CV06	24797100	EL, 10 μ F, $\pm$ 20%, 50V
CV07	24797010	EL, 1 μ F, $\pm$ 20%, 50V
CV08	24797010	EL, 1 μ F, $\pm$ 20%, 50V
CV10	24797010	EL, 1 μ F, $\pm$ 20%, 50V
CV11	24797010	EL, 1 μ F, $\pm$ 20%, 50V
CV12	24797100	EL, 10 μ F, $\pm$ 20%, 50V
CV14	24232103	CD, 0.01 μ F, +80%, -20%
CV15	24797100	EL, 10 μ F, $\pm$ 20%, 50V
CV16	24797100	EL, 10 μ F, $\pm$ 20%, 50V
CV17	24797100	EL, 10 μ F, $\pm$ 20%, 50V
CV18	24797220	EL, 22 μ F, $\pm$ 20%, 50V
CV19	24232103	CD, 0.01 μ F, +80%, -20%
CV20	24212102	CD, 1000pF, $\pm$ 10%
CV21	24212102	CD, 1000pF, $\pm$ 10%
CV23	24793471	EL, 470 μ F, $\pm$ 20%, 10V
CV24	24212102	CD, 1000pF, $\pm$ 10%
CV25	24212102	CD, 1000pF, $\pm$ 10%
CV26	24212102	CD, 1000pF, $\pm$ 10%
CV27	24212102	CD, 1000pF, $\pm$ 10%
CV31	24793471	EL, 470 μ F, $\pm$ 20%, 10V
CV32	24797101	EL, 100 μ F, $\pm$ 20%, 50V
CV33	24085981	EL, 10 μ F, $\pm$ 20%, 16V, Non-Polar

Location No.	Part No.	Description
CV34	24797100	EL, 10 μ F, $\pm$ 20%, 50V
CV35	24085981	EL, 10 μ F, $\pm$ 20%, 16V, Non-Polar
CV37	24212471	CD, 470pF, $\pm$ 10%
CV38	24212471	CD, 470pF, $\pm$ 10%
CV39	24212471	CD, 470pF, $\pm$ 10%
CV40	24212471	CD, 470pF, $\pm$ 10%
CV41	24232103	CD, 0.01 μ F, +80%, -20%
CV46	24794331	EL, 330 μ F, $\pm$ 20%, 16V
CV72	24794220	EL, 22 μ F, $\pm$ 20%, 16V
CV73	24794220	EL, 22 μ F, $\pm$ 20%, 16V
CV74	24436470	CD, 47pF
CW01	24797100	EL, 10 μ F, $\pm$ 20%, 50V
CW02	24232103	CD, 0.01 μ F, +80%, -20%
CW05	24232103	CD, 0.01 μ F, +80%, -20%
CX02	24797478	EL, 0.47 μ F, $\pm$ 20%, 50V
CX03	24797478	EL, 0.47 μ F, $\pm$ 20%, 50V
CX04	24797478	EL, 0.47 μ F, $\pm$ 20%, 50V
CX05	24206010	EL, 1 μ F, 50V
CX06	24206010	EL, 1 μ F, 50V
CX07	24206010	EL, 1 μ F, 50V
CX08	24797100	EL, 10 μ F, $\pm$ 20%, 50V
CX09	24797010	EL, 1 μ F, $\pm$ 20%, 50V
CX10	24797010	EL, 1 μ F, $\pm$ 20%, 50V
CX11	24797010	EL, 1 μ F, $\pm$ 20%, 50V

RESISTORS

R208	24366432	CF, 4300 ohm
R211	24366473	CF, 47k ohm
R212	24366103	CF, 10k ohm
R213	24366103	CF, 10k ohm
R214	24366182	CF, 1800 ohm
R215	24366152	CF, 1500 ohm
R216	24366333	CF, 33k ohm
R218	24366472	CF, 4700 ohm
R219	24366472	CF, 4700 ohm
R220	24366473	CF, 47k ohm
R221	24366473	CF, 47k ohm
R223	24366472	CF, 4700 ohm
R224	24366682	CF, 6800 ohm
R228	24366182	CF, 1800 ohm
R231	24366102	CF, 1k ohm
R233	24366821	CF, 820 ohm
R237	24366471	CF, 470 ohm
R242	24366153	CF, 15k ohm
R243	24366103	CF, 10k ohm
R244	24366203	CF, 20k ohm
R245	24366622	CF, 6200 ohm
R246	24366103	CF, 10k ohm
R247	24366101	CF, 100 ohm
R252	24066596	VR, 500 ohm, 1/10W
R253	24066596	VR, 500 ohm, 1/10W
R255	24066601	VR, 20k ohm, 1/10W
R260	24366333	CF, 33k ohm
R261	24366153	CF, 15k ohm
R262	24366153	CF, 15k ohm
R266	24366153	CF, 15k ohm
R267	24366153	CF, 15k ohm
R268	24366184	CF, 180k ohm
R270	24366822	CF, 8200 ohm
R281	24366104	CF, 100k ohm
R283	24366391	CF, 390 ohm
R285	24366473	CF, 47k ohm
R286	24366473	CF, 47k ohm

Location No.	Part No.	Description
R287	24366223	CF, 22k ohm
R289	24366473	CF, 47k ohm
R290	24366103	CF, 10k ohm
R299	24366681	CF, 680 ohm
R301	24366221	CF, 220 ohm
R302	24366274	CF, 270k ohm
R303	24366563	CF, 56k ohm
R304	24366243	CF, 24k ohm
R305	24366151	CF, 150 ohm
R306	24366473	CF, 47k ohm
R307	24366474	CF, 470k ohm
R308	24366102	CF, 1k ohm
R309	24383511	OMF, 510 ohm, 2W
R311	24366473	CF, 47k ohm
R312	24366204	CF, 200k ohm
R313	24366104	CF, 100k ohm
R314	24366105	CF, 1M ohm
R315	24366155	CF, 1.5M ohm
R316	24366154	CF, 150k ohm
R317	24366103	CF, 10k ohm
R318	24366101	CF, 100 ohm
R319	24366101	CF, 100 ohm
R320	24366101	CF, 100 ohm
R321	24366102	CF, 1k ohm
R322	24321159	MF, 1.5 ohm, 1/2W
R323	24322688	MF, 0.68 ohm, 1W
R327	24339479	MF, 4.7 ohm, 2W
R329	24366223	CF, 22k ohm
R334	24383751	OMF, 750 ohm, 2W
R340	24382271	OMF, 270 ohm, 1W
R341	24366182	CF, 1800 ohm
R342	24366562	CF, 5600 ohm
R342	24366103	CF, 10k ohm
R343	24321109	MF, 1 ohm, 1/2W
R344	24366392	CF, 3900 ohm
R344	24366392	CF, 3900 ohm
R345	24366103	CF, 10k ohm
R346	24366103	CF, 10k ohm
R349	24366153	CF, 15k ohm
R402	24366273	CF, 27k ohm
R403	24366272	CF, 2700 ohm
R404	24552472	OMF, 4700 ohm, 1/2W
R405	24366431	CF, 430 ohm
R406	24366221	CF, 220 ohm
R407	24366131	CF, 130 ohm
R408	24366562	CF, 5600 ohm
R409	24366204	CF, 200k ohm
R410	24552472	OMF, 4700 ohm, 1/2W
R411	24366561	CF, 560 ohm
R413	24366151	CF, 150 ohm
R415	24382272	OMF, 2700 ohm, 1W
R416	24510562	Cement, 5600 ohm, 5W
R421	24366104	CF, 100k ohm
R430	24366272	CF, 2700 ohm
R431	24366102	CF, 1k ohm
R432	24366473	CF, 47k ohm
R433	24366333	CF, 33k ohm
R434	24366123	CF, 12k ohm
R440	24366472	CF, 4700 ohm
R442	24382102	OMF, 1k ohm, 1W
R444	24322398	MF, 0.39 ohm, 1W
R446	24533151	FR, 150 ohm, 2W
R448	24338338	MF, 0.33 ohm, 1W
R452	24069547	VR, 5k ohm, 0.08W, CC

Location No.	Part No.	Description
R470	24322568	MF, 0.56 ohm, 1W
R471	24552101	OMF, 100 ohm, 1/2W
R472	24376393	CF, 39k ohm, 1/2W
R474	24366331	CF, 330 ohm
R475	24366102	CF, 1k ohm
R477	24366153	CF, 15k ohm
R501	24366561	CF, 560 ohm
R502	24366334	CF, 330k ohm
R504	24366391	CF, 390 ohm
R507	24366822	CF, 8200 ohm
R508	24366561	CF, 560 ohm
R509	24366223	CF, 22k ohm
R511	24366202	CF, 2k ohm
R512	24366182	CF, 1800 ohm
R513	24366122	CF, 1200 ohm
R514	24366562	CF, 5600 ohm
R515	24366221	CF, 220 ohm
R516	24366221	CF, 220 ohm
R517	24366221	CF, 220 ohm
R518	24366475	CF, 4.7M ohm
R520	24366102	CF, 1k ohm
R522	24366185	CF, 1.8M ohm
R523	24366332	CF, 3300 ohm
R528	24366221	CF, 220 ohm
R529	24366681	CF, 680 ohm
R530	24366472	CF, 4700 ohm
R531	24366472	CF, 4700 ohm
R532	24366122	CF, 1200 ohm
R533	24366331	CF, 330 ohm
R534	24366331	CF, 330 ohm
R535	24366331	CF, 330 ohm
R536	24366152	CF, 1500 ohm
R537	24366152	CF, 1500 ohm
R538	24366152	CF, 1500 ohm
R540	24366222	CF, 2200 ohm
R541	24366222	CF, 2200 ohm
R543	24366222	CF, 2200 ohm
R547	24366560	CF, 56 ohm
R548	24366101	CF, 100 ohm
R551	24066955	VR, 1k ohm, 1/10W
R557	24066600	VR, 10k ohm, 1/10W
R558	24066600	VR, 10k ohm, 1/10W
R559	24066600	VR, 10k ohm, 1/10W
R561	24366270	CF, 27 ohm
R562	24366270	CF, 27 ohm
R563	24366100	CF, 10 ohm
R564	24366181	CF, 180 ohm
R565	24366181	CF, 180 ohm
R591	24383153	OMF, 15k ohm, 2W
R592	24383153	OMF, 15k ohm, 2W
R593	24383153	OMF, 15k ohm, 2W
R633	24366229	CF, 2.2 ohm
R634	24366229	CF, 2.2 ohm
R635	24366333	CF, 33k ohm
R636	24366333	CF, 33k ohm
R641	24366103	CF, 10k ohm
R642	24366101	CF, 100 ohm
R643	24552331	OMF, 330 ohm, 1/2W
R644	24552331	OMF, 330 ohm, 1/2W
R662	24366103	CF, 10k ohm
R663	24366104	CF, 100k ohm
R666	24366103	CF, 10k ohm
R667	24366103	CF, 10k ohm
R668	24366103	CF, 10k ohm

Location No.	Part No.	Description
R670	24366222	CF, 2200 ohm
R673	24366332	CF, 3300 ohm
R674	24366102	CF, 1k ohm
R675	24366332	CF, 3300 ohm
R681	24366222	CF, 2200 ohm
R687	24366103	CF, 10k ohm
R688	24366104	CF, 100k ohm
R689	24366103	CF, 10k ohm
△ R801	24004914	Metal-Glazed Resistor, 5.6M ohm, 1/2W
R803	24382683	OMF, 68k ohm, 1W
R805	24366101	CF, 100 ohm
R810	24366122	CF, 1200 ohm
R812	24552103	OMF, 10k ohm, 1/2W
R813	24366272	CF, 2700 ohm
R815	24552102	OMF, 1k ohm, 1/2W
R816	24382180	OMF, 18 ohm, 1W
R817	24322278	MF, 0.27 ohm, 1W
R818	24321829	MF, 8.2 ohm, 1/2W
R819	24366472	CF, 4700 ohm
R820	24366101	CF, 100 ohm
R825	24366472	CF, 4700 ohm
R832	24321228	MF, 0.22 ohm, 1/2W
△ R833	24005007	Metal-Glazed Resistor, 8.2M ohm, 1W
R842	24366681	CF, 680 ohm
R843	24366821	CF, 820 ohm
R848	24552332	OMF, 3300 ohm, 1/2W
R860	24366681	CF, 680 ohm
R861	24366221	CF, 220 ohm
R863	24366102	CF, 1k ohm
R865	24366681	CF, 680 ohm
R866	24366471	CF, 470 ohm
R867	24366103	CF, 10k ohm
R868	24366472	CF, 4700 ohm
R870	24382223	OMF, 22k ohm, 1W
R872	24569339	Cement, 3.3 ohm, 10W
R878	24531560	FR, 56 ohm, 1/2W
R879	24366472	CF, 4700 ohm
R884	24531120	FR, 12 ohm, 1/2W
R890	24019340	PTC Thermistor, 18 ohm, 290V
R893	24366103	CF, 10k ohm
R901	24552272	OMF, 2700 ohm, 1/2W
R902	24552272	OMF, 2700 ohm, 1/2W
R903	24552272	OMF, 2700 ohm, 1/2W
R920	24000929	FR, 1.5 ohm, 2W
RA01	24366223	CF, 22k ohm
RA02	24366103	CF, 10k ohm
RA03	24366103	CF, 10k ohm
RA05	24366103	CF, 10k ohm
RA06	24366103	CF, 10k ohm
RA07	24366222	CF, 2200 ohm
RA10	24366473	CF, 47k ohm
RA11	24366102	CF, 1k ohm
RA12	24366103	CF, 10k ohm
RA13	24366103	CF, 10k ohm
RA16	24366101	CF, 100 ohm
RA18	24366101	CF, 100 ohm
RA19	24366102	CF, 1k ohm
RA20	24366331	CF, 330 ohm
RA21	24366331	CF, 330 ohm
RA22	24366103	CF, 10k ohm
RA23	24366473	CF, 47k ohm

Location No.	Part No.	Description
RA24	24366162	CF, 1600 ohm
RA25	24366162	CF, 1600 ohm
RA26	24366162	CF, 1600 ohm
RA27	24366223	CF, 22k ohm
RA28	24366223	CF, 22k ohm
RA29	24366562	CF, 5600 ohm
RA32	24366223	CF, 22k ohm
RA34	24366223	CF, 22k ohm
RA35	24366102	CF, 1k ohm
RA36	24366223	CF, 22k ohm
RA40	24366223	CF, 22k ohm
RA41	24366223	CF, 22k ohm
RA60	24366392	CF, 3900 ohm
RA61	24366102	CF, 1k ohm
RA62	24366103	CF, 10k ohm
RA63	24366103	CF, 10k ohm
RA68	24366473	CF, 47k ohm
RA69	24366223	CF, 22k ohm
RA81	24366103	CF, 10k ohm
RA84	24366392	CF, 3900 ohm
RA85	24366392	CF, 3900 ohm
RA86	24366472	CF, 4700 ohm
RA87	24366472	CF, 4700 ohm
RA90	24366391	CF, 390 ohm
RA92	24366102	CF, 1k ohm
RA94	24366392	CF, 3900 ohm
RA95	24366392	CF, 3900 ohm
RA97	24366332	CF, 3300 ohm
RA98	24366682	CF, 6800 ohm
RA99	24366203	CF, 20k ohm
RB01	24366103	CF, 10k ohm
RB01	24366470	CF, 47 ohm
RB02	24366332	CF, 3300 ohm
RB03	24366103	CF, 10k ohm
RB04	24366103	CF, 10k ohm
RB05	24366332	CF, 3300 ohm
RB06	24366333	CF, 33k ohm
RB10	24366182	CF, 1800 ohm
RB11	24366471	CF, 470 ohm
RB12	24366333	CF, 33k ohm
RB13	24366564	CF, 560k ohm
RB14	24366123	CF, 12k ohm
RB15	24366392	CF, 3900 ohm
RB16	24366392	CF, 3900 ohm
RB19	24366223	CF, 22k ohm
RD01	24000211	FR, 15 ohm, 1/2W
RD02	24323229	MF, 2.2 ohm, 2W
RD03	24366562	CF, 5600 ohm
RD04	24552102	OMF, 1k ohm, 1/2W
RD05	24552332	OMF, 3300 ohm, 1/2W
RD06	24366242	CF, 2400 ohm
RD07	24366273	CF, 27k ohm
RD08	24366114	CF, 110k ohm
RD09	24366153	CF, 15k ohm
RD10	24366153	CF, 15k ohm
RG03	24366101	CF, 100 ohm
RG04	24366101	CF, 100 ohm
RG10	24366362	CF, 3600 ohm
RG11	24366362	CF, 3600 ohm
RG12	24366272	CF, 2700 ohm
RG13	24366272	CF, 2700 ohm
RG14	24366223	CF, 22k ohm
RG15	24366223	CF, 22k ohm
RM03	24366182	CF, 1800 ohm

Location No.	Part No.	Description
RM04	24366242	CF, 2400 ohm
RM26	24366153	CF, 15k ohm
RN01	24366101	CF, 100 ohm
RN02	24366152	CF, 1500 ohm
RN04	24366303	CF, 30k ohm
RN05	24366221	CF, 220 ohm
RN06	24366471	CF, 470 ohm
RN07	24366153	CF, 15k ohm
RN08	24366185	CF, 1.8M ohm
RN09	24366104	CF, 100k ohm
RN10	24366153	CF, 15k ohm
RN11	24366103	CF, 10k ohm
RN12	24366122	CF, 1200 ohm
RN13	24366103	CF, 10k ohm
RN15	24366473	CF, 47k ohm
RN16	24366473	CF, 47k ohm
RN18	24366473	CF, 47k ohm
RN19	24366475	CF, 4.7M ohm
RN20	24366103	CF, 10k ohm
RN21	24366473	CF, 47k ohm
RN22	24366473	CF, 47k ohm
RN24	24366332	CF, 3300 ohm
RN25	24366105	CF, 1M ohm
RN26	24366103	CF, 10k ohm
RN27	24366473	CF, 47k ohm
RN28	24366473	CF, 47k ohm
RN29	24366473	CF, 47k ohm
RN30	24366473	CF, 47k ohm
RN34	24366104	CF, 100k ohm
RN35	24366561	CF, 560 ohm
RV01	24366101	CF, 100 ohm
RV02	24366102	CF, 1k ohm
RV03	24366472	CF, 4700 ohm
RV04	24366472	CF, 4700 ohm
RV06	24366102	CF, 1k ohm
RV08	24366102	CF, 1k ohm
RV10	24366101	CF, 100 ohm
RV11	24366472	CF, 4700 ohm
RV12	24366472	CF, 4700 ohm
RV13	24366101	CF, 100 ohm
RV16	24366104	CF, 100k ohm
RV17	24366223	CF, 22k ohm
RV18	24366473	CF, 47k ohm
RV21	24366101	CF, 100 ohm
RV22	24366101	CF, 100 ohm
RV23	24366561	CF, 560 ohm
RV24	24552331	OMF, 330 ohm, 1/2W
RV25	24019261	FR, 47 ohm, $\pm 2\%$, 1/4W
RV26	24366222	CF, 2200 ohm
RV27	24366104	CF, 100k ohm
RV28	24366104	CF, 100k ohm
RV29	24366221	CF, 220 ohm
RV34	24366151	CF, 150 ohm
RV36	24366750	CF, 75 ohm
RV37	24366104	CF, 100k ohm
RV38	24366104	CF, 100k ohm
RV39	24366750	CF, 75 ohm
RV40	24366750	CF, 75 ohm
RV41	24366103	CF, 10k ohm
RV42	24366750	CF, 75 ohm
RV43	24366620	CF, 62 ohm
RV44	24366620	CF, 62 ohm
RV45	24366620	CF, 62 ohm
RV47	24366101	CF, 100 ohm

Location No.	Part No.	Description
RV49	24366102	CF, 1k ohm
RV60	24552391	OMF, 390 ohm, 1/2W
RV61	24366130	CF, 13 ohm
RV62	24366130	CF, 13 ohm
RV63	24366130	CF, 13 ohm
RV64	24366104	CF, 100k ohm
RV65	24366104	CF, 100k ohm
RV66	24366104	CF, 100k ohm
RV67	24366104	CF, 100k ohm
RV71	24366750	CF, 75 ohm
RV72	24366103	CF, 10k ohm
RV73	24366750	CF, 75 ohm
RV74	24366472	CF, 4700 ohm
RV75	24366472	CF, 4700 ohm
RV76	24366101	CF, 100 ohm
RV77	24366152	CF, 1500 ohm
RV78	24366103	CF, 10k ohm
RV79	24366750	CF, 75 ohm
RV81	24366101	CF, 100 ohm
RV82	24366222	CF, 2200 ohm
RV91	24366102	CF, 1k ohm
RW01	24366223	CF, 22k ohm
RW02	24366333	CF, 33k ohm
RW03	24366103	CF, 10k ohm
RW04	24366223	CF, 22k ohm
RW05	24366333	CF, 33k ohm
RW06	24366103	CF, 10k ohm
RW07	24552561	OMF, 560 ohm, 1/2W
RW08	24366103	CF, 10k ohm
RW09	24366123	CF, 12k ohm
RW10	24366103	CF, 10k ohm
RW11	24366103	CF, 10k ohm
RW12	24366123	CF, 12k ohm
RW13	24366103	CF, 10k ohm
RW14	24366123	CF, 12k ohm
RW15	24366123	CF, 12k ohm
RW25	24366221	CF, 220 ohm
RW26	24366221	CF, 220 ohm
RX01	24366102	CF, 1k ohm
RX02	24366101	CF, 100 ohm
RX03	24366101	CF, 100 ohm
RX10	24366101	CF, 100 ohm
RX12	24366102	CF, 1k ohm
RX13	24366332	CF, 3300 ohm
RX14	24366103	CF, 10k ohm
RX19	24366221	CF, 220 ohm
RX20	24366152	CF, 1500 ohm
RX21	24366221	CF, 220 ohm
RX22	24366221	CF, 220 ohm
RX27	24366102	CF, 1k ohm

COILS & TRANSFORMERS

L201	23289220	Coil, Peaking, TRF4220AF
L202	23289390	Coil, Peaking, TRF4390AF
L203	23289270	Coil, Peaking, TRF4270AF
L301	23103859	Coil (Ferrite Bead), TEM2011
L302	23289101	Coil, Peaking, TRF4101AF
L315	23238714	Coil, Peaking, TRF4100AJ
L405	23221685	Coil, Choke, TLN3193
L412	23221684	Coil, Choke, TLN3191D
L414	23103859	Coil (Ferrite Bead), TEM2011
L421	23248116	Coil, Choke, TLN3368D
L422	23248122	Coil, Choke, TLN3384D
L441	23233948	Coil, Linearity, TLN2137G

Location No.	Part No.	Description
L462	-----	DY, Supplied with V901
L503	23238714	Coil, Peaking, TRF4100AJ
L551	23250972	Coil, 1H-Delay Matching, TRF5418D
L590	23289100	Coil, Peaking, TRF4100AF
L698	23238562	Coil, Peaking, TRF4109AJ
L699	23238562	Coil, Peaking, TRF4109AJ
L810	23103859	Coil (Ferrite Bead), TEM2011
L811	23103859	Coil (Ferrite Bead), TEM2011
L821	23280016	Coil, Peaking, TRF4100AZ
L823	23221747	Coil, Choke, TRF9253D
L826	23248073	Coil, Choke, TLN3299D
L829	23103859	Coil (Ferrite Bead), TEM2011
L842	23103859	Coil (Ferrite Bead), TEM2011
L866	23289229	Coil, Peaking, TRF42R2AF
L880	23280016	Coil, Peaking, TRF4100AZ
△ L901	23200276	Coil, Degaussing, TSB-2330BR
LA01	23289109	Coil, Peaking, TRF41R0AF
LA12	23221803	Coil, Choke, TLN3040D
LB01	23262001	Coil, IF, TRF1166D
LD02	23221896	Coil, Choke, TLN3061
LM01	23262797	Coil, IF, TRF1093D
LM02	23250865	Coil, IF, TRF5414DA
LM03	23250865	Coil, IF, TRF5414DA
LM04	23262798	Coil, IF, TRF1092D
LN01	23238713	Coil, Peaking, TRF4120AJ
LN02	23238714	Coil, Peaking, TRF4100AJ
LN03	23238710	Coil, Peaking, TRF4220AJ
LV01	23289220	Coil, Peaking, TRF4220AF
LV03	23289270	Coil, Peaking, TRF4270AF
T401	23224336	Transformer, Horiz. Drive, TLN1083
△ T461	23236454	Transfórmer, Flyback, TFB4117AR
T801	23211670	Line Filter, TRF3164G
△ T803	23217214	Transformer, Converter, TPW3283AR
SEMICONDUCTORS		
Q205	A6317440	Transistor, 2SC1815-Y
Q208	A6317440	Transistor, 2SC1815-Y
Q213	A6317440	Transistor, 2SC1815-Y
Q214	A6342206	Transistor, 2SC2878-A(TE
Q215	A6342206	Transistor, 2SC2878-A(TE
Q216	23114454	Transistor, DTC144E-S
Q240	A6317440	Transistor, 2SC1815-Y
Q301	B0378560	IC, TA8427K
Q302	B0384683	IC, TA8859AP
Q340	A6534053	Transistor, 2SA1015-Y(TE
Q340	A6317440	Transistor, 2SC1815-Y
Q402	A678971D	Transistor, 2SC1569 FA-5
Q404	A6872801	Transistor, 2SD2253(FA)
Q408	23905815	IC, UPC2412AHF
Q430	A6317440	Transistor, 2SC1815-Y
Q470	A6547250	Transistor, 2SA1320
Q501	B0383827	IC, TA8759BN
Q505	A6363200	Transistor, 2SC3619
Q507	A6363200	Transistor, 2SC3619
Q509	A6363200	Transistor, 2SC3619
Q510	A6330059	Transistor, 2SC2482(C)
Q511	A6534053	Transistor, 2SA1015-Y(TE
Q604	23314791	Transistor, 2PA1015Y
Q605	B0376856	IC, TA8211AH
Q608	A6010040	Transistor, RN2004

Location No.	Part No.	Description
Q621	A6342206	Transistor, 2SC2878-A(TE
Q622	A6342206	Transistor, 2SC2878-A(TE
Q671	A6342206	Transistor, 2SC2878-A(TE
Q673	A6342206	Transistor, 2SC2878-A(TE
Q801	23904247	IC, STR-S6708
Q802	23314141	Transistor, 2SC3852
△ Q826	A8643108	Photo Coupler, TLP621(GR-LF
Q827	A6907751	IC, S1854
Q828	A6317440	Transistor, 2SC1815-Y
Q831	A6317440	Transistor, 2SC1815-Y
Q835	23318299	IC, L78MR05
Q836	A6534053	Transistor, 2SA1015-Y(TE
Q861	23314141	Transistor, 2SC3852
Q870	A6333346	Transistor, 2SC2655-Y(C)
Q871	A6317440	Transistor, 2SC1815-Y
Q890	23314141	Transistor, 2SC3852
QA01	23905276	IC, 85332A-130S
QA02	23904665	IC, NM24C04EN
QA10	23319935	IC, MM1096BS
QB01	A6317440	Transistor, 2SC1815-Y
QB02	A6317440	Transistor, 2SC1815-Y
QB11	A6317440	Transistor, 2SC1815-Y
QB12	A6534053	Transistor, 2SA1015-Y(TE
QD01	A6625365	Transistor, 2SB688-O(BS)
QD02	A6317440	Transistor, 2SC1815-Y
QD03	A6317440	Transistor, 2SC1815-Y
QG01	B0385643	IC, TA1216AN
QN02	A6534053	Transistor, 2SA1015-Y(TE
QN03	A6534053	Transistor, 2SA1015-Y(TE
QN04	A6342206	Transistor, 2SC2878-A(TE
QN05	A6342206	Transistor, 2SC2878-A(TE
QN07	A6000020	Transistor, RN1002
QN08	A6317440	Transistor, 2SC1815-Y
QN13	A6342206	Transistor, 2SC2878-A(TE
QN15	A6342206	Transistor, 2SC2878-A(TE
QV01	B0383720	IC, TA8747N
QV03	A6342206	Transistor, 2SC2878-A(TE
QV04	A6534053	Transistor, 2SA1015-Y(TE
QV05	A6534053	Transistor, 2SA1015-Y(TE
QV06	A6534053	Transistor, 2SA1015-Y(TE
QV07	A6317440	Transistor, 2SC1815-Y
QV81	A6534053	Transistor, 2SA1015-Y(TE
QW01	A6534053	Transistor, 2SA1015-Y(TE
QW02	A6534053	Transistor, 2SA1015-Y(TE
QW03	A6534053	Transistor, 2SA1015-Y(TE
QW04	A6534053	Transistor, 2SA1015-Y(TE
QX01	23119139	IC, AN5862K
QX06	A6317440	Transistor, 2SC1815-Y
QX07	A6317440	Transistor, 2SC1815-Y
QX09	A6317440	Transistor, 2SC1815-Y
QX10	A6317440	Transistor, 2SC1815-Y
QY09	A6000020	Transistor, RN1002
D108	23316756	Diode, Zener, MTZJ33D
D201	A7150041	Diode, 1SS104
D203	23115599	Diode, 1N4148
D204	23115599	Diode, 1N4148
D205	23115599	Diode, 1N4148
D246	23115599	Diode, 1N4148
D301	23118479	Diode, BYD33J
D302	23118479	Diode, BYD33J
D303	23115599	Diode, 1N4148
D320	23118822	Diode, ERB12-02
D321	23118822	Diode, ERB12-02
D332	23316794	Diode, SC570A

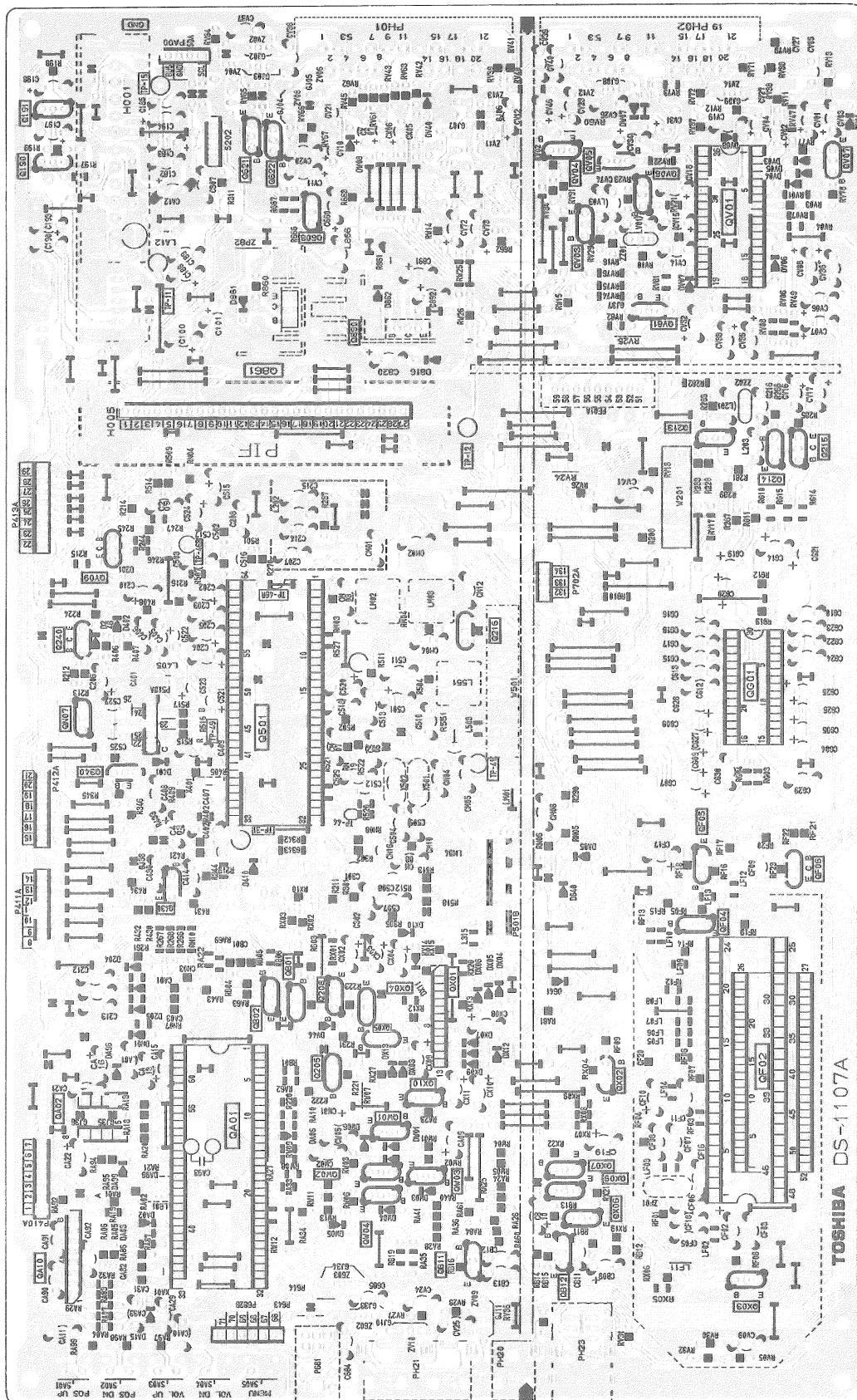
Location No.	Part No.	Description
D340	23316666	Diode, Zener, MTZJ4.7B
D401	23316719	Diode, Zener, MTZJ12B
D402	23316734	Diode, Zener, MTZJ20B
D403	23316719	Diode, Zener, MTZJ12B
D406	23118479	Diode, BYD33J
D408	23118052	Diode, RU4Z
D410	23316684	Diode, Zener, MTZJ8.2B
D471	A7801205	SCR, SF0R3G42
D474	23316728	Diode, Zener, MTZJ16B
D475	23316719	Diode, Zener, MTZJ12B
D591	23316554	Diode, 1SS146
D592	23316554	Diode, 1SS146
D593	23316554	Diode, 1SS146
D594	A7150258	Diode, 1SS176
D601	23115599	Diode, 1N4148
D636	23115599	Diode, 1N4148
D637	23115599	Diode, 1N4148
D638	23115599	Diode, 1N4148
D639	23115599	Diode, 1N4148
D640	23115599	Diode, 1N4148
D641	23115599	Diode, 1N4148
D801	23316391	Diode, D3SB60, 4109
D802	23118479	Diode, BYD33J
D803	23118479	Diode, BYD33J
D804	23316678	Diode, Zener, MTZJ6.8B
D805	23115599	Diode, 1N4148
D806	23118479	Diode, BYD33J
D807	23118479	Diode, BYD33J
D808	23118479	Diode, BYD33J
D809	23316672	Diode, Zener, MTZJ5.6B
D810	23115599	Diode, 1N4148
D811	23115599	Diode, 1N4148
D812	23115599	Diode, 1N4148
D813	23118479	Diode, BYD33J
D814	23115599	Diode, 1N4148
D815	23316725	Diode, Zener, MTZJ15B
D816	23316674	Diode, Zener, MTZJ6.2A
D825	23115599	Diode, 1N4148
D826	23115599	Diode, 1N4148
D830	23118052	Diode, RU4Z
D831	23118052	Diode, RU4Z
D832	23118451	Diode, RU-4A
D844	23316718	Diode, Zener, MTZJ12A
D848	23316666	Diode, Zener, MTZJ4.7B
D861	23316672	Diode, Zener, MTZJ5.6B
D862	23316690	Diode, Zener, MTZJ10B
D874	23316670	Diode, Zener, MTZJ5.1C
D875	23115599	Diode, 1N4148
D878	23316671	Diode, Zener, MTZJ5.6A
DA02	23316675	Diode, Zener, MTZJ6.2B
DA03	23316675	Diode, Zener, MTZJ6.2B
DA05	23115599	Diode, 1N4148
DA06	23115599	Diode, 1N4148
DA15	23316675	Diode, Zener, MTZJ6.2B
DA96	23316675	Diode, Zener, MTZJ6.2B
DA98	23316675	Diode, Zener, MTZJ6.2B
DA99	23316675	Diode, Zener, MTZJ6.2B
DB01	23358504	LED, Red, SCL003URC3FX
DD01	23118479	Diode, BYD33J
DD02	23316582	Diode, ERC20-06
DD03	23118479	Diode, BYD33J
DD04	23115599	Diode, 1N4148
DD05	23316718	Diode, Zener, MTZJ12A
DD06	23316672	Diode, Zener, MTZJ5.6B

Location No.	Part No.	Description
DD07	23316672	Diode, Zener, MTZJ5.6B
DN01	23115599	Diode, 1N4148
DV01	23316690	Diode, Zener, MTZJ10B
DV03	23316690	Diode, Zener, MTZJ10B
DV04	23316690	Diode, Zener, MTZJ10B
DV06	24366152	CF, 1500 ohm
DV07	23316690	Diode, Zener, MTZJ10B
DV08	23316687	Diode, Zener, MTZJ9.1B
DV40	23115599	Diode, 1N4148
DV44	23316666	Diode, Zener, MTZJ4.7B
DW01	23115599	Diode, 1N4148
DW02	23115599	Diode, 1N4148
DW03	23115599	Diode, 1N4148
DW04	23115599	Diode, 1N4148
DW05	23316663	Diode, Zener, MTZJ4.3B
DW06	23316667	Diode, Zener, MTZJ4.7C
DW07	23316722	Diode, Zener, MTZJ13B
DW08	23316722	Diode, Zener, MTZJ13B
DX03	23115599	Diode, 1N4148
DX04	23115599	Diode, 1N4148
DX05	23115599	Diode, 1N4148
DX06	23115599	Diode, 1N4148
DX07	23115599	Diode, 1N4148
DX08	23115599	Diode, 1N4148
DX09	23115599	Diode, 1N4148
DX11	23115599	Diode, 1N4148
DX12	23316666	Diode, Zener, MTZJ4.7B
DX13	23115599	Diode, 1N4148

MISCELLANEOUS

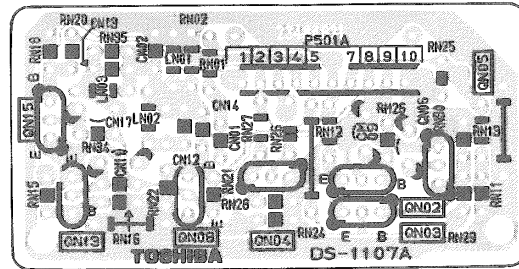
△F801	23144507	Fuse, 3.15A
F801A	23165433	Holder, Fuse
△F803	23144874	Fuse, 0.8A
F803A	23165433	Holder, Fuse
G282	24366181	CF, 180 ohm
G343	24366103	CF, 10k ohm
GV84	24366681	CF, 680 ohm
GV85	24366681	CF, 680 ohm
GV86	24366681	CF, 680 ohm
GV87	24366681	CF, 680 ohm
GV88	24366681	CF, 680 ohm
GV89	24366681	CF, 680 ohm
H005	23148261	Module, MVGS47, IF FR MULTI
KB01	23904946	Remote Sensor, RPM-676CBR-S
P681	23363607	Headphone Jack, 3.5mm
△P801	23372014	Power Cord
PH01	23365598	Connector, 21Pin
PH02	23365598	Connector, 21Pin
PH20	23363252	Pin Jack, Yellow
PH21	23365508	Jack, Phono
S202	23344333	Switch, Lever, 1C3P
△S801	23344395	Switch, Power
SA01	23145430	Switch, Push, 1C1P
SA02	23145430	Switch, Push, 1C1P
SA03	23145430	Switch, Push, 1C1P
SA04	23145430	Switch, Push, 1C1P
SA05	23145430	Switch, Push, 1C1P
△V901A	23902891	Socket, CRT, 10P
W201	23250120	Delay Line, TRF2133T
W501	23250950	Coil, 1H-Delay Line, DL711
W661	23351116	Speaker, SPK-1382, 60x120mm, 8 ohm

SIGNAL BOARD PB55030-1
BOTTOM (FOIL) SIDE



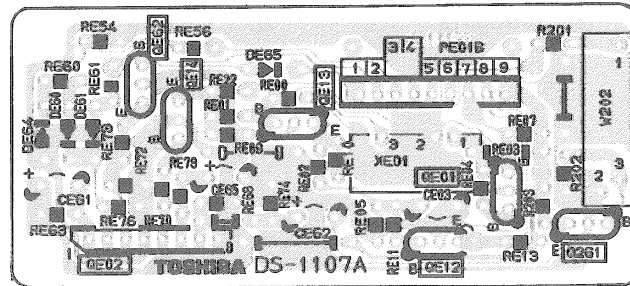
CHROMA BOARD PB55030-2

BOTTOM (FOIL) SIDE



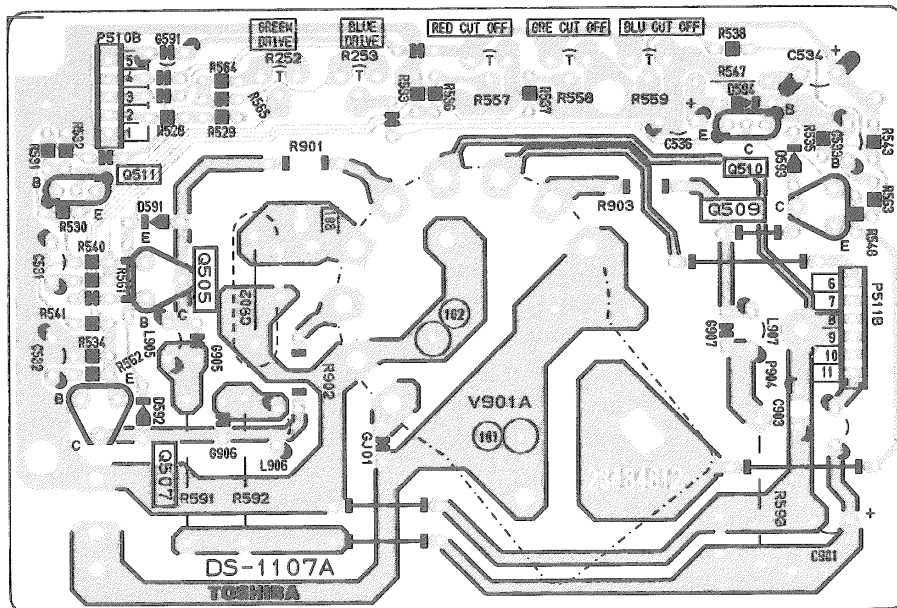
LTI BOARD PB55030-3

BOTTOM (FOIL) SIDE



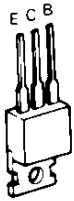
CRT DRIVE BOARD PB5447X

BOTTOM (FOIL) SIDE

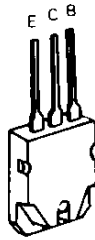


TERMINAL VIEW OF TRANSISTORS

① 2SC1569



② 2SC3927(A)



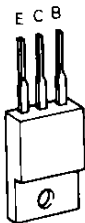
③ 2SC2580-C
2SC2655



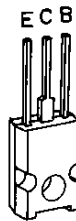
④ 2SA933S
2SA1015-Y
2SA1320-Y
2SC752GTM
2SC1685-Q
2SC1740S
2SC1815-N
2SC1959-Y
2SC2120-Y
2SC2878-A



⑤ 2SB1186A
2SC3852
2SD2253



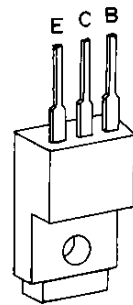
⑥ 2SC3619



⑦ RN1203
RN1204
RN1206
RN2004



⑧ 2SB1186A
2SD1763A



SPECIFICATIONS

Input Power Rating:	AC 220 ~ 240 Volts, 50 Hz 100 watts
Aerial Input Impedance:	75 ohm unbalanced type for VHF, UHF and CATV
Receiving Channels:	SECAM L Standard: VHF channels B to C, 1 to 6, B to Q, 71 to 86 UHF channels 21 to 69 PAL B/G Standard, SECAM B/G Standard: VHF channels 2 to 4, 5 to 12 and S1 to S20, S21 to S41 UHF channels 21 to 69 PAL I Standard: UHF channels 21 to 69
Video Input:	PAL, SECAM 50Hz/60Hz (For Video Disk Player) 4.43 NTSC (For VCR playback), 3.58 NTSC (For VCR playback)
Intermediate Frequencies:	Picture I-F carrier frequency 38.9/33.95 MHz (L VL) Sound I-F carrier frequency L System 32.4 MHz (L VH, U/40.45 MHz (L VL) B/G System 33.4 MHz I System 32.9 MHz
Picture Tube:	28 inches, A66ECY13X31, 660 mm (diagonal of viewable area) 110° deflection
Sound Output:	10 Watts + 10Watts
Speakers:	120 mm x 60 mm oval, 2 pcs (MAIN)
Aux. Terminals:	21 pin socket, S-VIDEO, VIDEO/AUDIO INPUT socket, Phone socket
Cabinet:	Table type
Dimensions:	Height 568.7 mm Width 760 mm Depth 480 mm
Mass:	33.5 kg
Features:	NICAM Digital stereo system, OFF-timer

Specifications are subject to change without notice.



030-9625

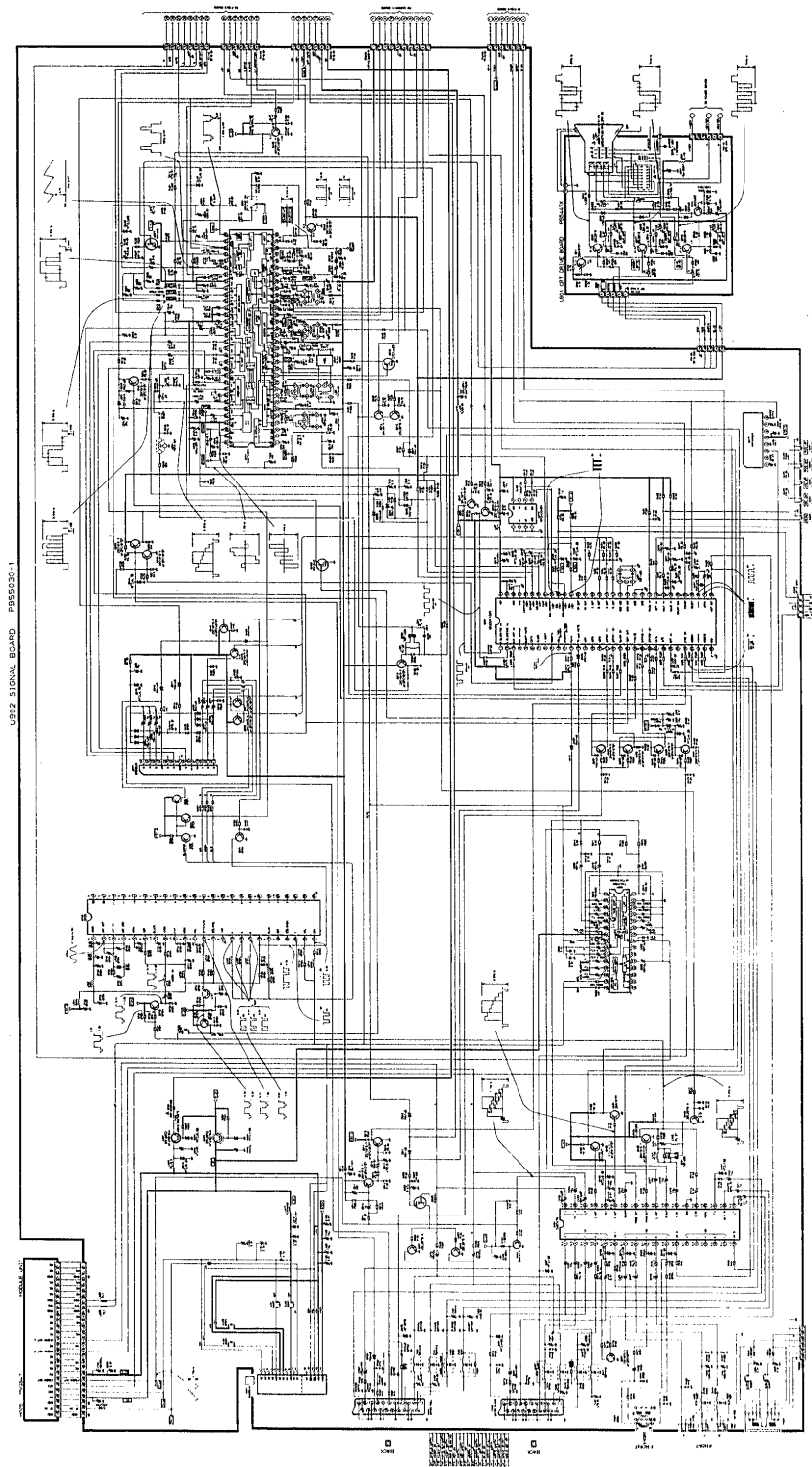
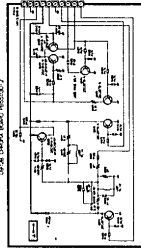
SCHEMATIC DIAGRAM MODEL: 2880DF (1/2)

CAUTION: The international hazard symbol "X" is placed on the schematic diagram and the parts list designates components in the original model or specified in the parts list. The mounting position of replacement parts is to be identical with the original model or specified in the parts list. **WARNING:** Observe the following instructions on page 1. Do not disassemble the receiver through improper servicing.

OBSERVATION OF VOLTAGES AND WAVEFORMS
 1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 V.
 2. Waveforms are taken with oscilloscope and a sensitivity probe.
 3. All waveforms are taken with the receiver in the "ON" position.
 4. Waveforms are taken with the receiver in the "ON" position and the volume control is adjusted to the maximum position.

NOTES:
 1. O.C. means open circuit.
 2. There are several test points shown in this schematic diagram.
 3. The ground is common to all test points.
 4. The ground is common to all test points.

EXPRESSION
VALUE OF RESISTOR, CAPACITOR AND INDUCTOR
 1. The value of resistor, capacitor and inductor is expressed in the schematic diagram.
 2. The value of resistor is expressed in ohms, kilohms or megohms.
 3. The value of capacitor is expressed in picofarads, nanofarads or microfarads.
 4. The value of inductor is expressed in henries, millihenries or microhenries.

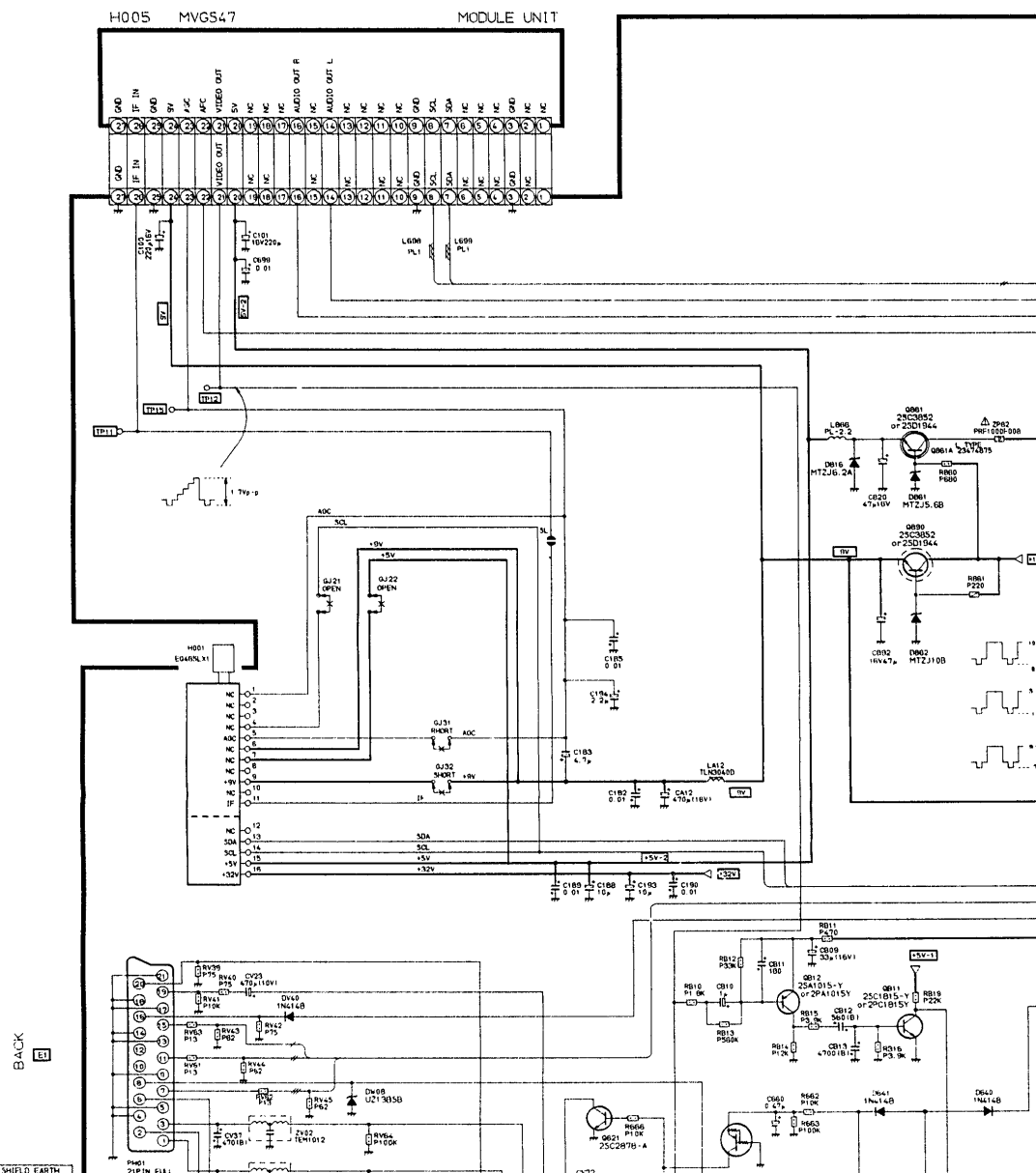


030-9625

SCHEMATIC DIAGRAM MODEL: 2860DF (1/2)

CAUTION: The international hazard symbols "△" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

OBS
1. V
V
2. A
3. V
4. M
B
p



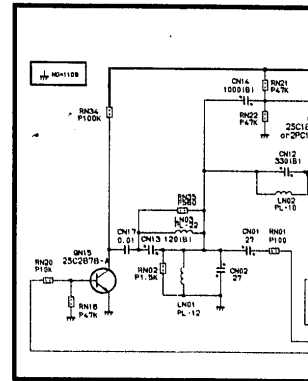
OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary $\pm 20\%$.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

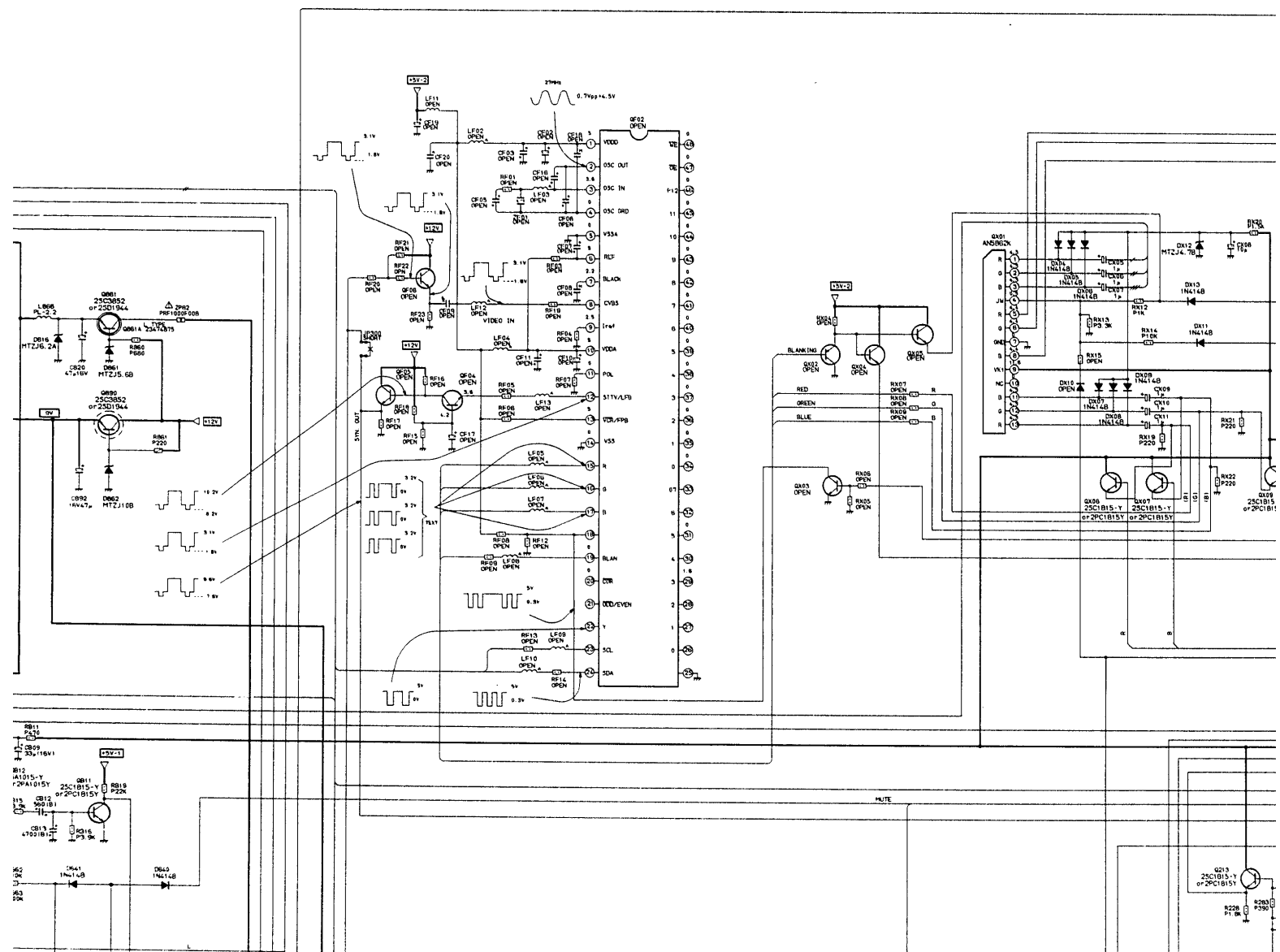
NOTES:

1. D.C. resistance value of a gram. These are measured
2. The circuits are subject to
3. $\bullet$: Solder links.

U902B CHR



U902 SIGNAL B



VALUE OF RESISTOR, CAPACITOR and INDUCTOR

ES:

• : Solder links.

[illegible]

The diagram illustrates a complex electronic circuit for a television receiver. At the top, several waveforms are shown, representing different signal types and their timing relative to a 5.0Vp-p and 1.5VOC reference. The circuit is divided into several functional blocks:

- VIDEO AMP:** This section includes components like Q201 (1N4148), Q202 (2N2130T), and Q203 (2N2130T), along with various resistors and capacitors for signal processing.
- AUDIO AMP:** This section includes components like Q204 (2N2130T), Q205 (2N2130T), and Q206 (2N2130T), along with various resistors and capacitors for audio processing.
- CONTROL SCANNING:** This section includes components like Q207 (2N2130T), Q208 (2N2130T), and Q209 (2N2130T), along with various resistors and capacitors for control and scanning functions.
- Tuning and Detection:** This section includes components like Q210 (2N2130T), Q211 (2N2130T), and Q212 (2N2130T), along with various resistors and capacitors for tuning and detection functions.

The circuit is powered by a 100V 125V AC source, which is connected to a transformer (T1) and a rectifier (D1). The power supply is regulated by a 100V 125V AC source, which is connected to a transformer (T1) and a rectifier (D1). The power supply is regulated by a 100V 125V AC source, which is connected to a transformer (T1) and a rectifier (D1).

CITOR and INDUCTOR

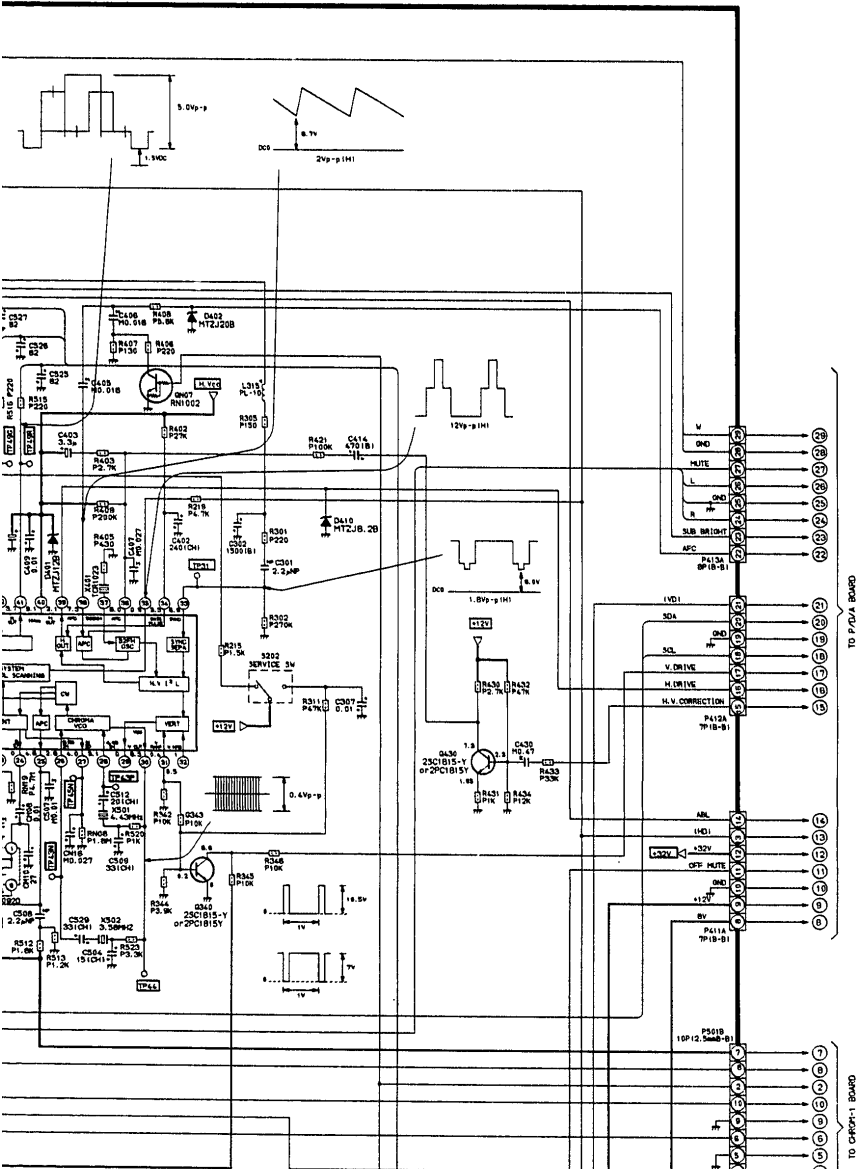
:=1,000, M=1,000,000

chematic, all capacitor values less than 1 are expres-

than 1 in pF.

chematic, all inductor values more than 1 are expres-

than 1 in H.



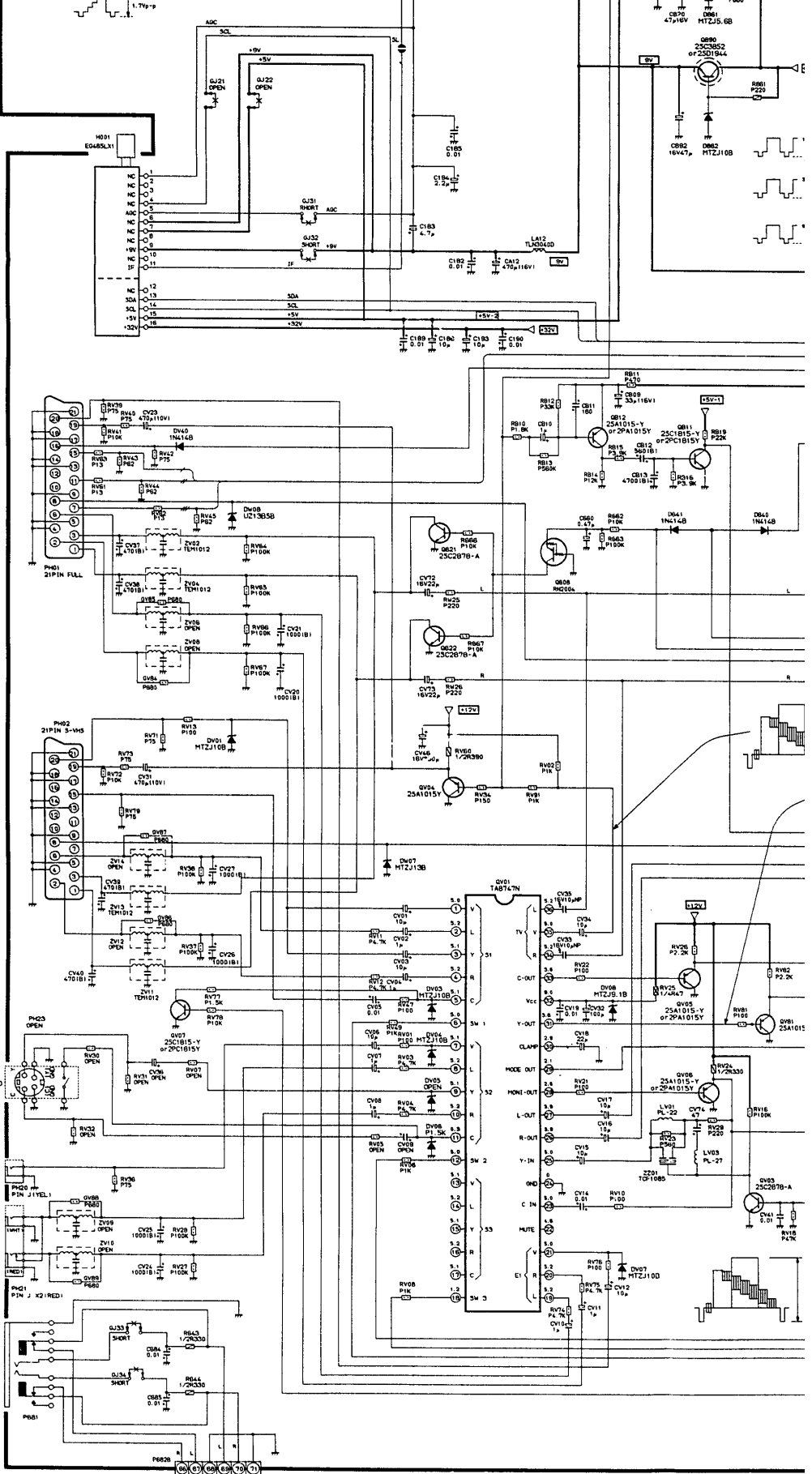
- 21 SHIELD EARTH
20 VIDEO IN
19 VIDEO OUT
18 RAPID BLK EARTH
17 VIDEO EARTH
16 RAPID BLANKING
15 RED IN
14 EARTH
13 RED EARTH
12 NC
11 GREEN IN
10 GREEN EARTH
9 EXT/TV
7 BLUE IN
6 AUDIO IN (L)
5 EARTH
4 AUDIO EARTH
3 AUDIO OUT (L)
2 AUDIO IN (R)
1 AUDIO OUT (R)

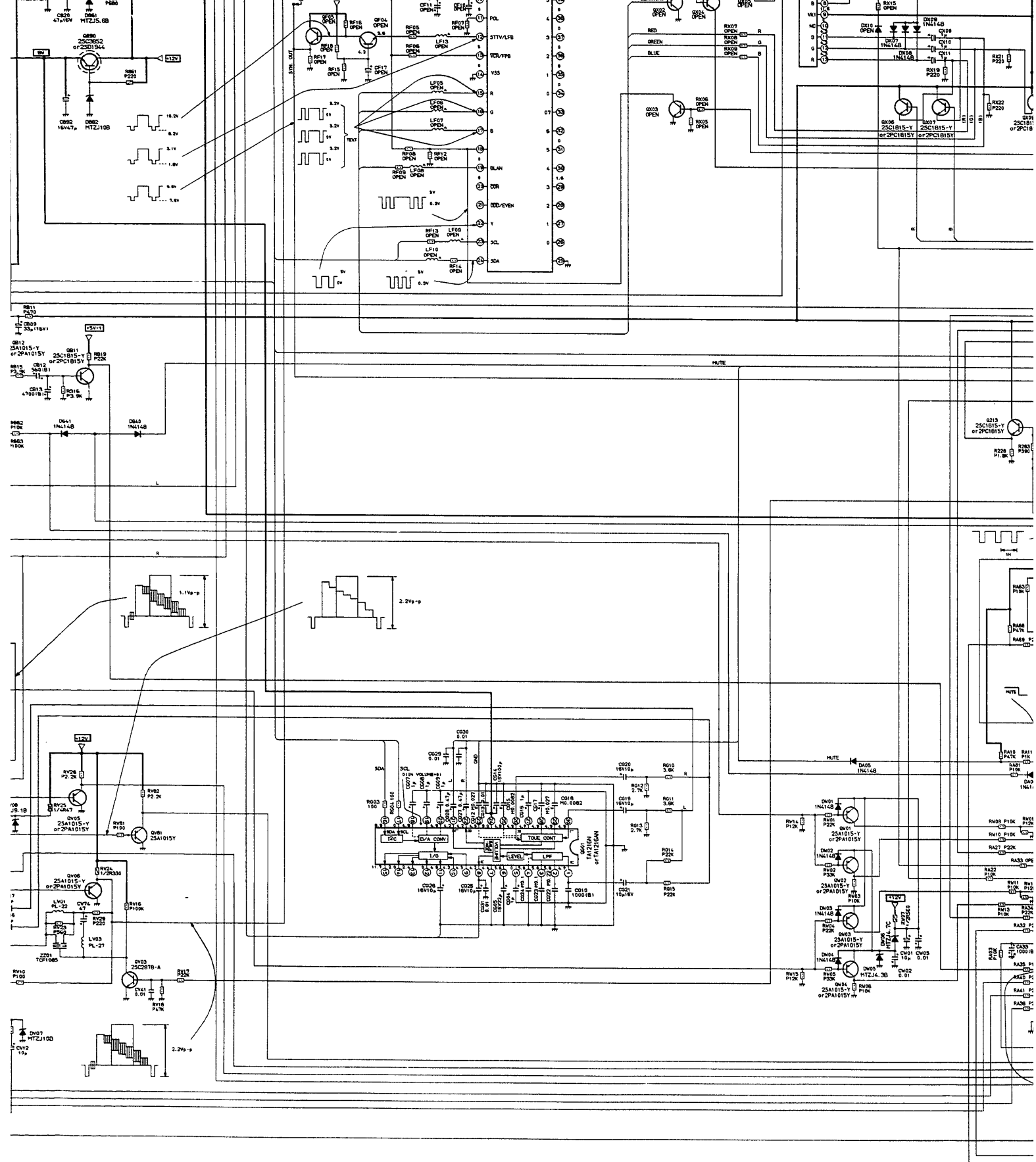
BACK

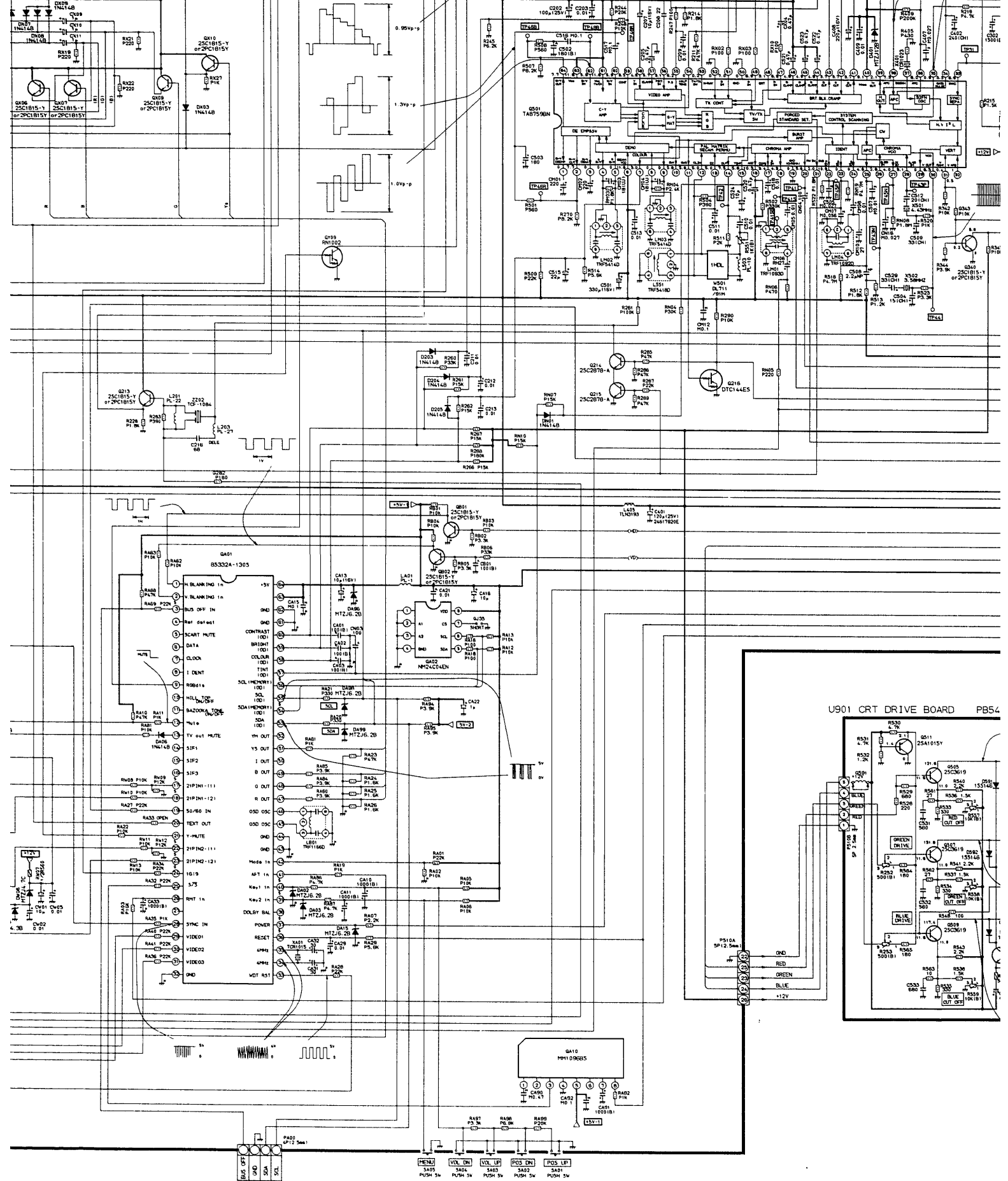
BACK

FRONT

FRONT





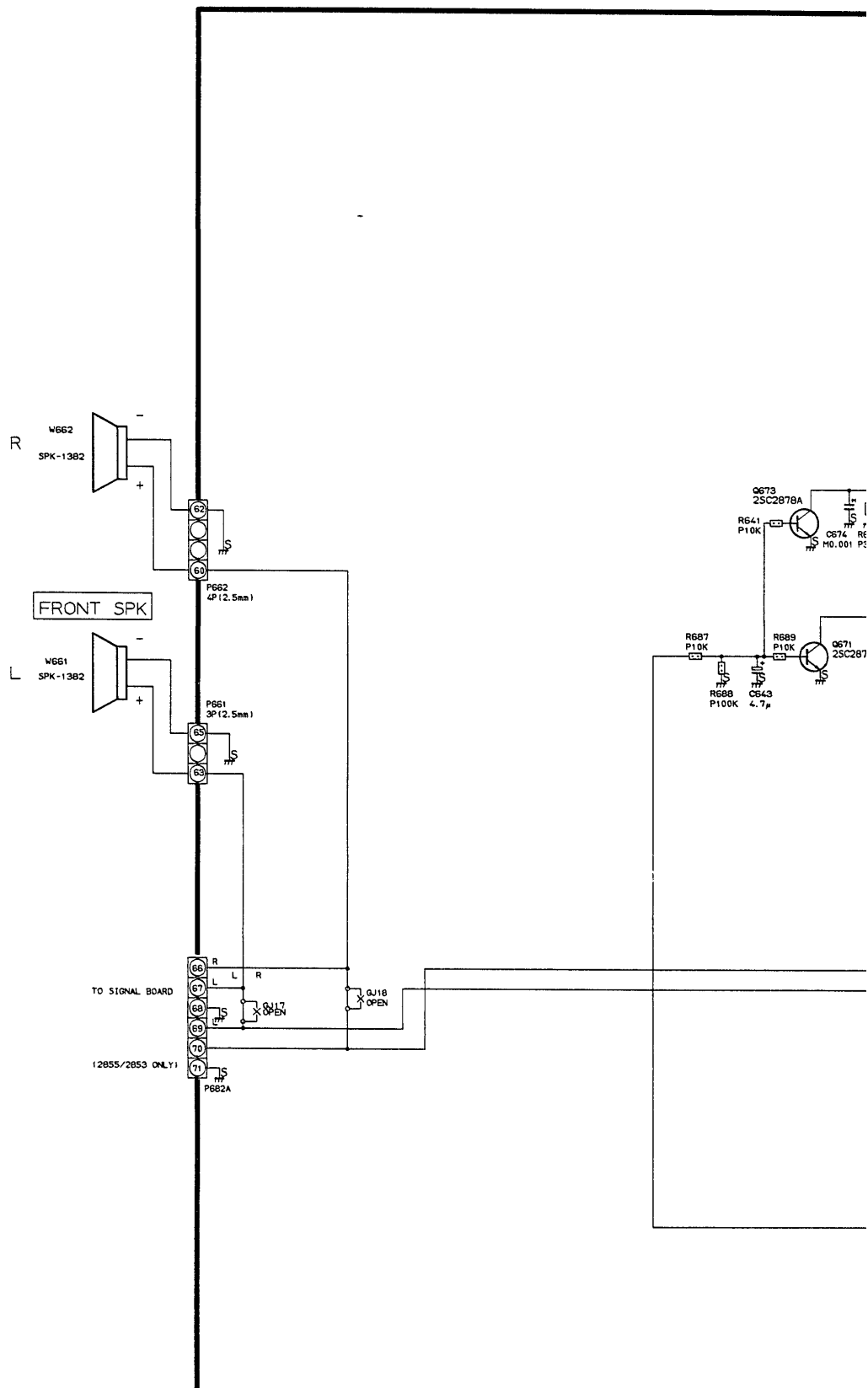


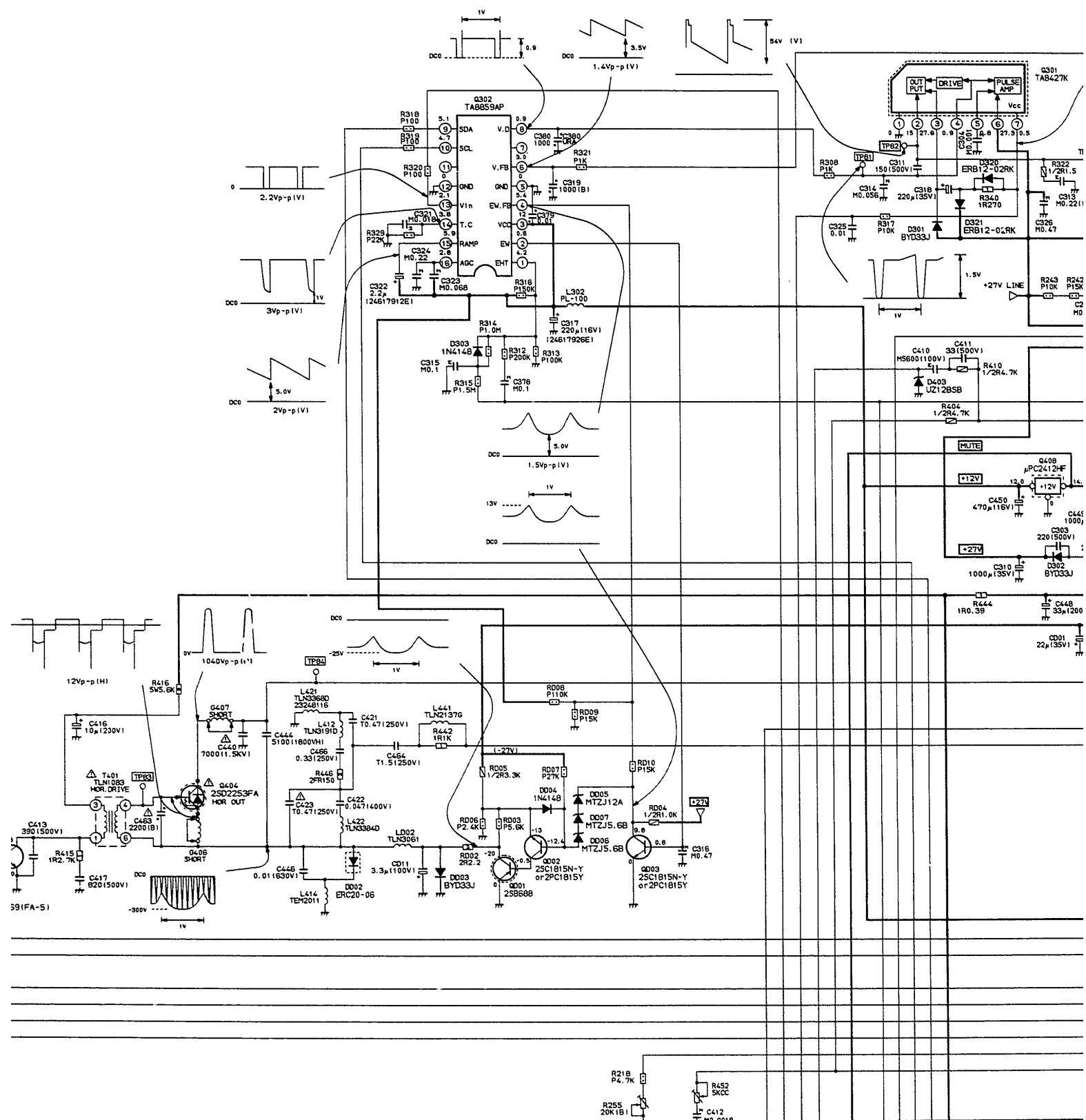
030-9625

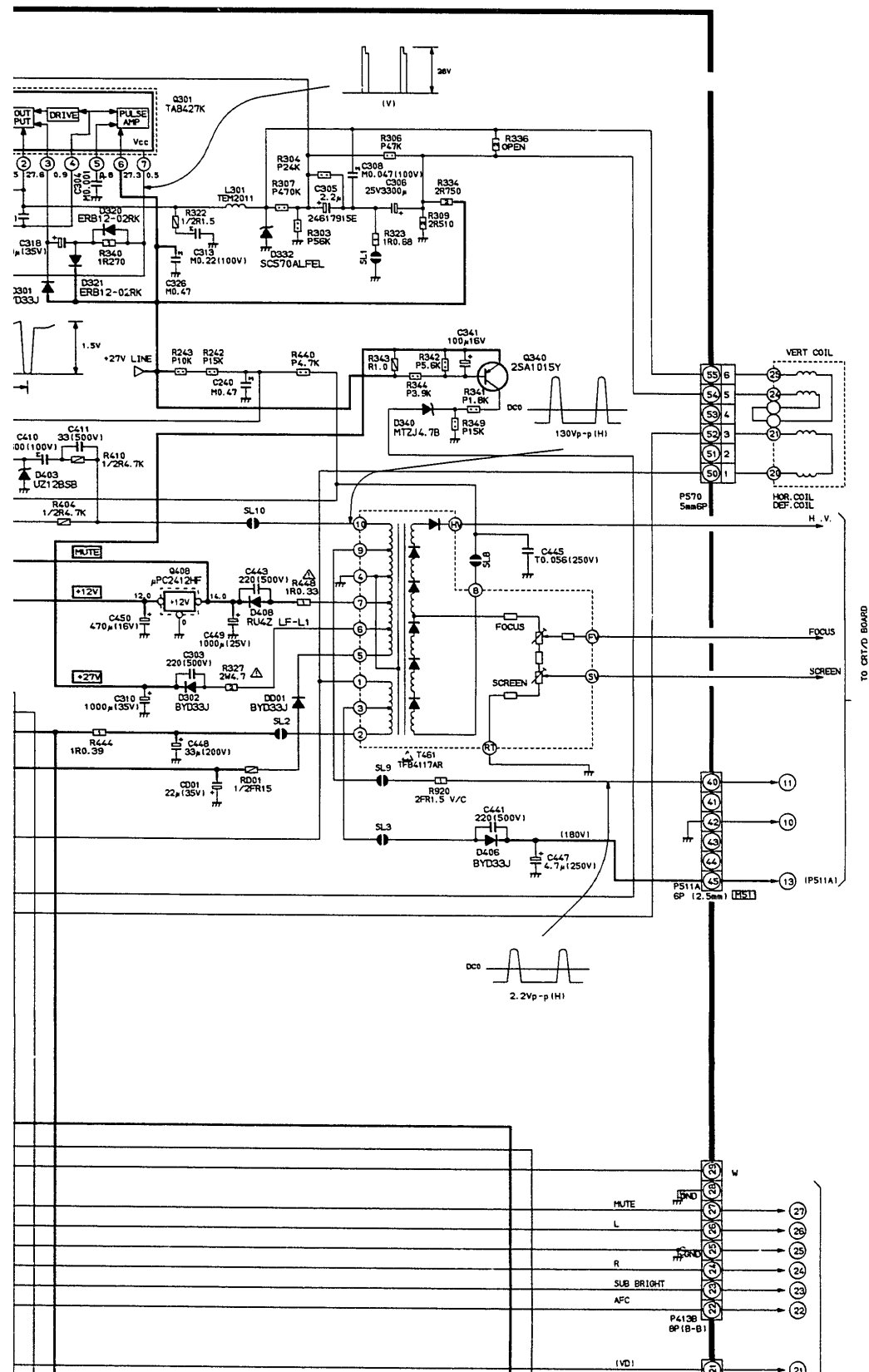
SCHEMATIC DIAGRAM

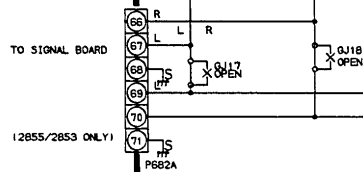
MODEL: 2860DF

(2/2)



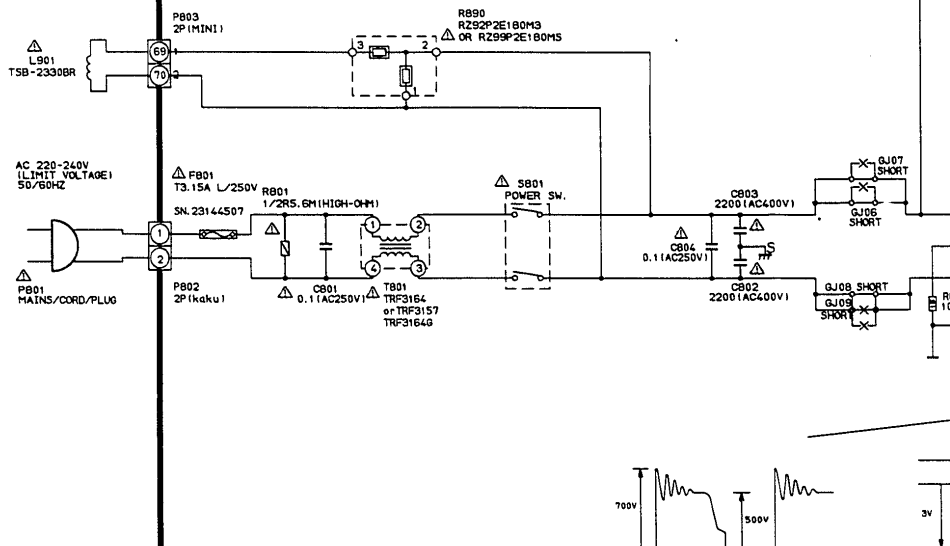




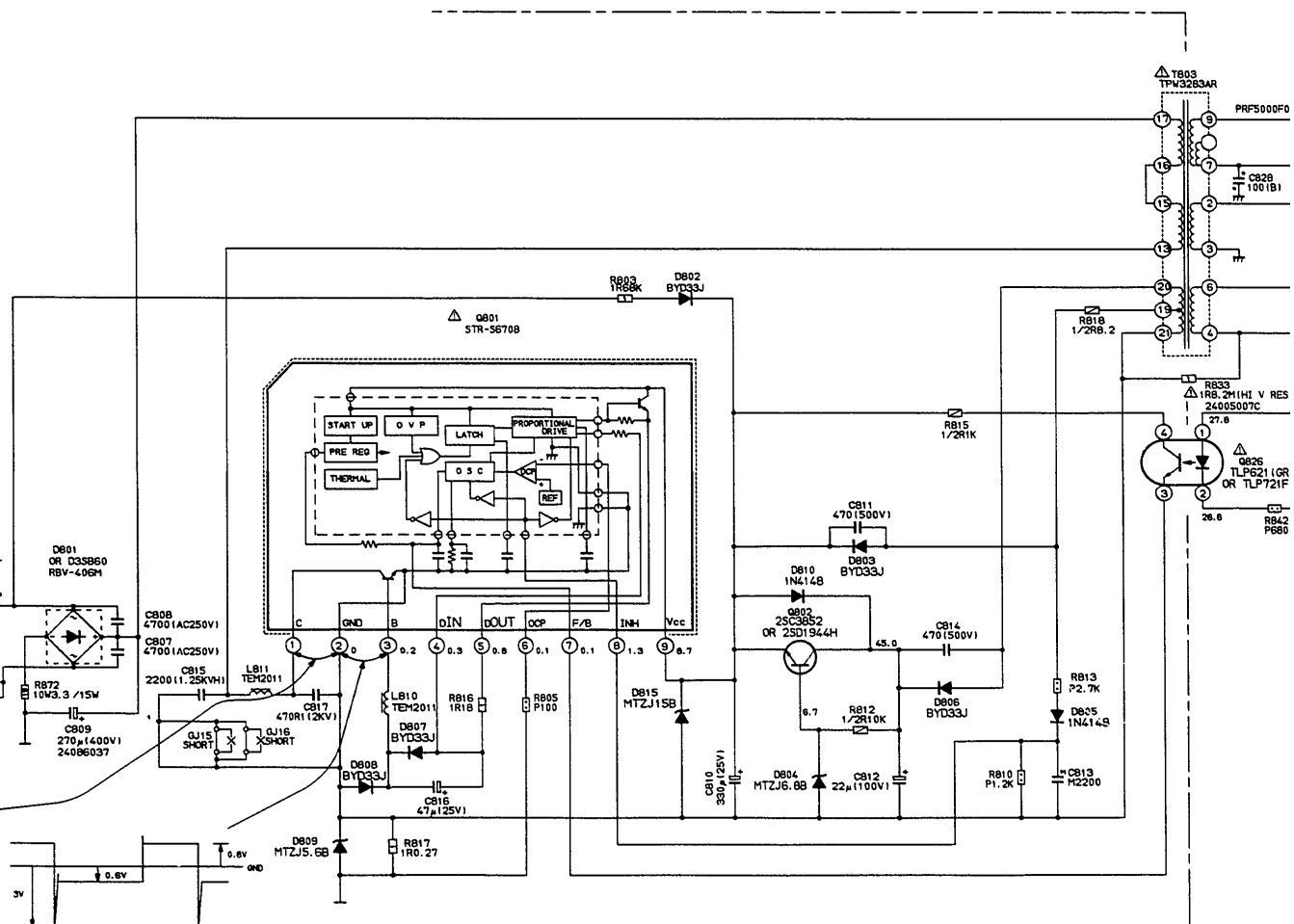
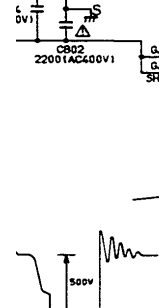


PAIR USED PARTS

	R1	R2
VIDEO COLOUR	PHILIPS	
V901	A66ECY13X31	A66EAK71X01
R920	2FR/1.5	1FR 3.9
R303	1/6 56K	1/6 39K
R304	1/6 24K	1/6 27K
R307	1/6 470K	1/6 360K
R309	2R 510	1R 390
R323	1R 0.68	1R 0.56
R336	OPEN	2R 330
R340	1R 270	1R 330
C306	25V 3300 μ	25V 4700 μ



U903 POW.



3 POW. DEF. AUD. BOARD

